

IMAGINE
COLCHESTER

Colchester Growth Management Strategy

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URBAN
STRATEGIES
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APPPLICATIONS
MANAGEMENT CONSULTING LTD.

ISL Engineering
and Land Services





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Highway 16

Sherwood
Park

Wye Road

City of
Edmonton

Anthony Henday Drive

Highway 21

Highway 628

Colchester

Highway 14



1 Introduction

Strathcona County continues to be one of the most liveable communities in Canada. As the Capital Region grows over the next 30 years, Strathcona County, with its strong economic base and high quality of life, will continue to attract new residents. Between 2013 and 2044, the County's population is expected to increase by 45,500 to 67,500 people. With Sherwood Park running out of room to accommodate urban growth, the County needs to plan a new urban community for newcomers as well as people growing up and aging in the County.

The County began considering potential locations for a new community in 2001 and, in the Municipal Development Plan (MDP) adopted in 2007, identified 2,291 hectares (5,662 acres) south of Sherwood Park as the Rural/Urban Transition Policy Area. The area, called Colchester, is bounded by Highway 628 on the north, Highway 21 on the east, Highway 14 on the south and the Transportation Utility Corridor on the west. The area was included within Priority Growth Areas in the 2009 Capital Region Growth Plan and in 2014 the County initiated "Imagine Colchester" to develop a growth management strategy for the area. This document is the culmination of a 10-month study of the challenges and opportunities associated with developing a new community in Colchester.

Purpose of this document

The purpose of this growth management strategy (GMS) is to describe and illustrate a vision, community design concept and set of policy directions intended to guide more detailed planning in Colchester, should the County decide to proceed with its development. Information in this report may also assist Council in comparing growing in Colchester versus other areas in the County, namely the Bremner area, northeast of Sherwood Park, which was designated a Urban Reserve Policy Area in the 2007 MDP and included within Priority Growth Area F in the Capital Region Growth Plan.

How the document is structured

The document is composed of seven sections:

Section 2 Context, summarizes important background to the Colchester Growth Management Strategy, including previous studies and other relevant planning documents.

Section 3 Plan Area, looks at existing conditions in Colchester and the opportunities and challenges they would create for developing a new urban community.

Section 4 Planning Process, describes the major tasks and extensive consultation undertaken to prepare the GMS.

Section 5 Vision and Principles, describes and illustrates the qualities and features a new community in Colchester should have, based on public input and best practices in sustainable community design.

Section 6 Community Design Concept, describes and illustrates how a new community in Colchester should be structured by land use, environmental and open space features, roads and other major infrastructure.

Section 7 Policy Directions, recommends land use, urban design and other policies that will help ensure the community is developed as envisioned.

Section 8 Implementation, outlines the various planning tools and other measures that will be needed to implement the GMS.

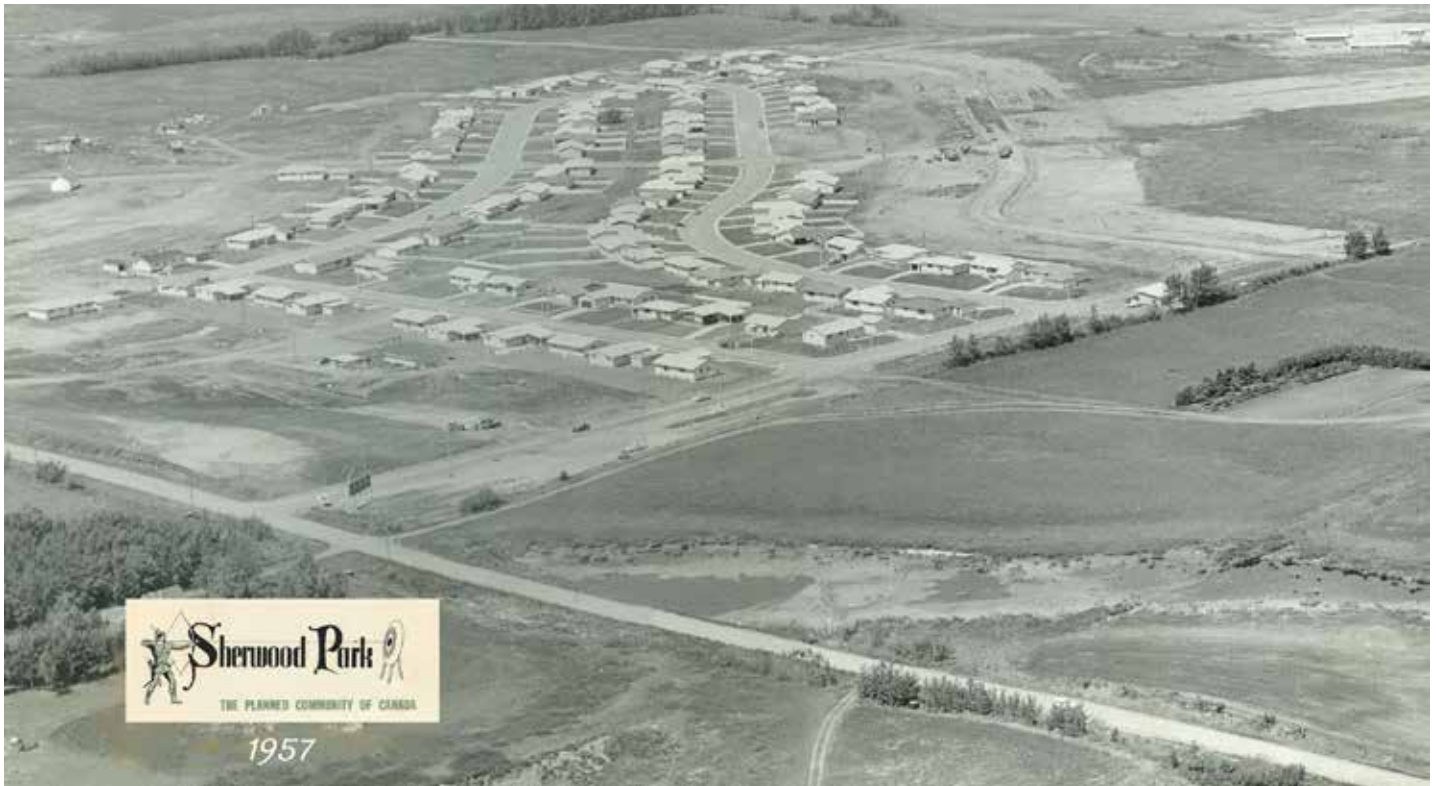
2 Context

Historical trends and current priorities provide the context for planning a new community. This section provides background that informs the Colchester Growth Management Strategy, including County and regional policy documents to which the strategy needs to conform. In setting the context for growing a new community, it looks back at Strathcona County's development over the past century before focusing on more recent studies and plans. The section concludes by establishing general parameters for the development of a new community in terms of population and required land area.

2.1 Strathcona County's Historical Growth

Historically Strathcona County has been a largely agricultural community with small hamlets to serve the needs of the rural population. The community of Colchester was founded in the 1890s as settlers were drawn to the area by the ready availability of affordable land. The area was officially declared open for settlement in 1894. At the time the land was heavily treed and had to be cleared, first by hand with axes and later with oxen and plows. An authentic log home remains from this period, constructed in 1895 by prominent early settler Charles Hill. The first subdivision to be created in Colchester was Trevithick Park in 1955, as three acre lots, with one eight-acre parcel set aside for parkland. The Colchester Community League was formed in 1968 and took over the development of the parkland, building the Colchester Community Hall and baseball diamonds that remain there today.

The county's development into the mixed urban and rural community of today began in the 1950s, when Council approved the first major urban development as a home for oil industry workers in 1953. The urban population of the county grew rapidly over the next few decades, doubling between 1961 and 1971, and again between 1971 and 1981. The county's urban/rural population split has shifted steadily toward urban as Sherwood Park has grown. In 2012, Sherwood Park's population was approximately 65,000, or about 71% of the county's total population of 95,000.



For the first half of the 20th century, Strathcona County was entirely rural, experiencing steady but modest growth. Since the 1960s, with the development of Sherwood Park, the county's urban population has increased significantly from decade to decade and this is expected to continue.

With the development of the North of Yellowhead Area Concept Plan area over the next decade, Sherwood Park will be fully developed. Existing country residential subdivisions east and south of Sherwood Park prevent the community from expanding in those directions, and proximity to heavy industry prevents residential growth to the north. To accommodate anticipated future growth, the County needs to develop a new, relatively self-contained urban community.

Figure 2.1
Population: 1901-1951

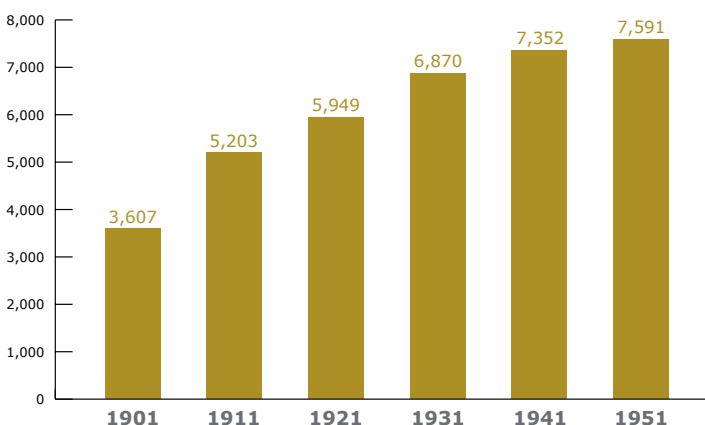
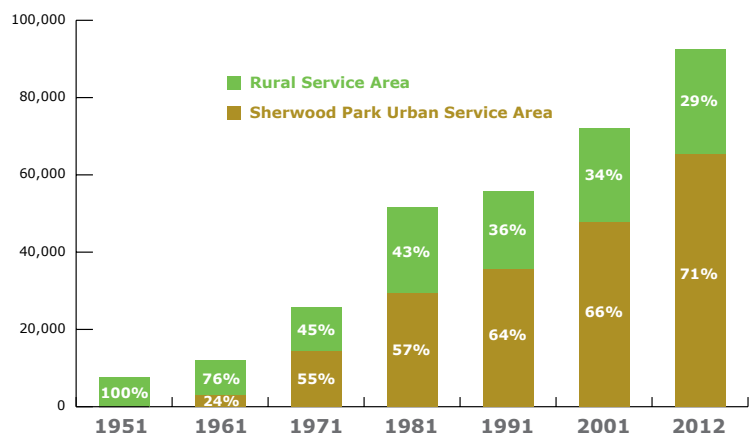


Figure 2.2
Urban & Rural Population: 1951-2012



2.2 The Path to Colchester

The Colchester area was first identified as a potential location for urban development in 2001 when the County completed a Future Areas Feasibility Study. The study evaluated four potential future urban areas in the west half of the county, between Leduc County and Fort Saskatchewan. A decision matrix was developed to evaluate the suitability of each potential growth area within seven categories: land development constraints, environmental considerations, land use, infrastructure, transportation network, other services and developable land.

Based on this analysis, one area was eliminated from further consideration due to the extent of existing oil and gas exploration activity in the area and two areas were identified as preferred Future Urban Areas in the Municipal Development Plan (MDP). These two areas were approximately equivalent to the Colchester and Bremner areas as they are defined today. The 2001 study was followed by an Evaluation of Urban Growth Options report that evaluated three geographic areas—the Colchester and Bremner areas identified in the Future Areas Feasibility Study, as well as a third area extending north from the hamlet of Ardrossan. Each of the options was evaluated against growth management principles in the areas of environment, community, servicing, economy and management. The report eliminated the Ardrossan area as an option

because its distance from Sherwood Park would result in considerably higher servicing costs than the other two options. It concluded that the Colchester area was the preferred option due, in part, to its lower class of agricultural land and access to infrastructure.

In 2007, Council approved a new Municipal Development Plan (MDP) for the County that identified Colchester as the “Rural/Urban Transition Policy Area” and Bremner as the “Urban Reserve Policy Area”. The MDP required that growth management strategies be prepared for Colchester and Bremner prior to more detailed planning being completed for either area. The 2009 Capital Region Growth Plan acknowledged the County’s MDP and included Colchester and Bremner within two of its Priority Growth Areas, and in 2012 Strathcona County updated its MDP to align with the Capital Region Growth Plan. Also in 2012, Council directed Administration to initiate a growth management strategy for Bremner and to commence preparation of a growth management strategy for Colchester following completion of the Bremner growth management strategy. The Bremner growth management strategy was received for information by Council in September 2014. Following this motion, preparation for the Colchester Growth Management Strategy commenced.

2.3 Strathcona County Strategic Plan

Strathcona County's Strategic Plan, *Powering our New Tomorrow*, serves as the foundation for all municipal plans and activities. The Strategic Plan establishes a vision for the County in 2030 as a specialized municipality that is a welcoming place to live for all and a model of ecological integrity. Eight priority areas are identified to help the County achieve the vision, grouped under five pillars of sustainability:

Economy

- World leading petrochemical cluster
- Effective and efficient municipal infrastructure
- Diverse economy

Governance

- Cooperative partnerships with community, business, industry and neighbouring governments

Social

- Helping, caring and safe community
- Healthy and active community

Cultural

- Vibrant, creative community

Environment

- Protect our environment and preserve biodiversity

2.4 Municipal Development Plan

The MDP sets out a strong vision for sustainability in Strathcona County and in new growth areas in particular. The County's sustainability and growth management objectives directly related to Colchester include:

- Demonstrate leadership towards applying sustainable practices throughout the community.
- Adopt a framework that ensures future community planning implements and builds sustainable and complete neighbourhoods that create a sense of community within the municipality.
- Adopt an approach to achieving sustainability that is forward-looking, responsible, adaptive, innovative and integrated.
- Ensure an adequate and suitable land base exists to accommodate urban growth needs.

Reflecting the County's Strategic Plan, the MDP requires that decisions involving future growth and development consider the pillars of sustainability. Specifically, the following 12 themes are to be considered when evaluating sustainable development: Land, Water, Natural Habitat, Carbon, Food, Transport, Materials, Economy, Waste, Well-being, Culture and Equity.

The MDP requires that a growth management strategy (GMS) be adopted by Council prior to any further planning or subdivision in either Bremner or Colchester. Until an Area Concept Plan based on the GMS is adopted, the policies for Agriculture-Large Holdings will continue to apply (Policy 4.19f). The MDP states that the GMS will include higher density development and mixed use components in conformity with the intent of the Capital Region Growth Plan (outlined on the following pages).

Policy 4.9 states that the County will ensure all new growth pays for itself and will not be a burden on the existing ratepayers, and will recognize the desirability of inter-generational equity. Policy 4.19a states that the County will ensure growth management strategies take into account appropriate transitioning of the built form, from urban to rural with regard to residential development. In addition, the County will ensure growth management strategies address potential fringe conflicts with existing agricultural operations throughout the stages of development (Policy 4.19e).

Policy 4.20 states that the following components must be incorporated into the plan for any potential growth area, whether urban or rural:

- a)** Consideration of future interchange requirements;
- b)** Appropriate setbacks and transitions from industry and pipeline corridors within the plan area as well as adjacent lands;
- c)** Transportation networks and efficiencies including the impacts on existing communities such as Sherwood Park;
- d)** Efficient water, sewer, stormwater and shallow utility infrastructure;
- e)** Environmental and farmland conservation;
- f)** Transit orientated compact development;
- g)** Timing and sequence of development;
- h)** Diversity of uses where possible, including employment, housing, community services, social needs and open spaces;

- i)** Resource and energy efficiencies of buildings, infrastructure, waste management; and

- j)** Community and urban design.

Policy 4.21 of the MDP sets out requirements for the types of analysis to be undertaken as part of the GMS, including:

- a)** Opportunities and constraints;
- b)** Water, sewer, stormwater and other infrastructure costs;
- c)** Transportation networks, including the impacts on existing communities such as Sherwood Park;
- d)** Environmental and farmland conservation;
- e)** Transit, municipal service efficiencies and financial impact;
- f)** Timing and sequence of build out as it relates to servicing, financial and infrastructure impacts;
- g)** Regional context with respect to infrastructure, land use, employment, transportation efficiencies and impacts;
- h)** Scenarios on various options to accommodate a diversity of uses - employment, housing, community services, social needs and open spaces within each area; and
- i)** Access to existing commercial development in Strathcona County in the short term.

2.5 Capital Region Growth Plan

Established in 2008, the Capital Region Board (CRB) consists of representatives from the 24 municipalities in the Alberta Capital Region. The purpose of the board is to facilitate regional cooperation and coordination on long range planning and decision making to maximize prosperity, sustainability and quality of life in the region. The board's initial task was to prepare and implement an integrated growth plan for the Capital Region, focused on land use, transit, affordable housing and geographic information systems (GIS).

The Capital Region Growth Plan: Growing Forward was approved by the Capital Region Board in 2009 and the Province in 2010. The plan emphasizes greater integration of land uses and joint planning of transportation and housing to optimize infrastructure investments and responsibly manage growth. To limit the footprint of urban development, the Growth Plan identifies seven priority growth areas within the region and sets population density targets for each. The Colchester area is included within Priority Growth Area B, which has a density target of 30-45+ dwelling units per net residential hectare.

Among the principles underpinning the land use component of the Growth Plan the following are most relevant to the Colchester GMS:

- Preserve and protect the environment
- Protect natural resources
- Minimize the impact of development on regional watersheds and airsheds
- Support expansion of medium and higher density residential housing forms
- Create inclusive communities
- Support public transit
- Support innovative and affordable housing options
- Integrate transportation systems with land use
- Support the expansion of transit services in various forms

The Capital Region Growth Plan is currently being updated and is anticipated to be completed in late 2016.

2.6 Projected Future Growth and Urban Land Requirement

A detailed land need analysis was performed to determine the land requirements for a new urban community in Strathcona County.

The CRB projects that the population of Strathcona County will grow by 49 to 73% to reach between 138,000 and 160,000 by 2044 (Source: Capital Region Population and Employment Projections, September 2013). This represents an increase of between 45,500 and 67,500 people based on the 2012 population of 92,500. Much of this growth can be accommodated in existing and planned communities. The undeveloped areas of Sherwood Park south of Highway 16 have room for approximately 9,600 people. The approved Cambrian Crossing Area Structure Plan, for the area of Sherwood Park north of Highway 16 and west of

Highway 21, includes residential lands that are expected to accommodate approximately 11,500 people. In addition, the county's hamlets of Ardrossan, Josephburg and South Cooking Lake have been planned to accommodate 5,000 more residents in total. When all this planned growth is subtracted from the overall growth projections for the county, the difference is between 19,400 and 41,400. Based on historic trends, 20% of this growth is expected to occur in the county's rural areas, leaving a population of between 15,500 and 33,100 people to be accommodated in new urban areas not yet planned (see Table 2.1).

Table 2.1
Accommodation of Population Growth to 2044

	Low	High
Projected County Population in 2044	138,000	160,000
Minus County Population 2012	92,500	92,500
Projected Population Growth	45,500	67,500
Minus Growth that can be Accommodated in Existing Plans <i>Sherwood Park (including Cambrian Crossing)</i> <i>Hamlets</i>	21,100 5,000	21,100 5,000
Remaining Growth	19,400	41,400
Minus Growth that will go to Rural Areas (20%)	3,900	8,300
Urban Growth to be Accommodated in a New Urban Area (80%)	15,500	33,100
Dwelling Units (based on 2.5 persons/unit)	6,200	13,240

New urban residential land required

From the county's unplanned urban growth of 15,500 to 33,100 people by 2044, the amount of land required for a new urban community can be estimated (see Table 2.2). Based on the assumption that the number of people living in each new dwelling unit will average 2.5, this population range translates to 6,200 to 13,240 units. Using a density of 30 to 40 dwelling units per net residential hectare (du/nrha), which falls within the CRB density target for Colchester of 30-45+ du/nrha, between 155 hectares of net residential land ($6,200 \div 40$) and 441 hectares ($13,240 \div 30$) will be required. These figures need to be inflated by 50% to account for the land required for hard infrastructure to service the new homes, including roads, utilities and stormwater management facilities. The resulting gross residential land requirement is 233 to 662 hectares.

Land required for new community facilities

A new urban community consists of much more than housing. Land is also required for community facilities, such as parks, schools and indoor recreation facilities, and for retail uses. Based on the County's target parkland ratio of 7.5 hectares per 1,000 residents, 116 to 248 hectares of parkland should be planned for a population of 15,500 to 33,100. Four to six primary schools will be needed at the bottom end of this population range, depending on whether they are K-6 or K-9 schools; 8 to 12 primary schools will be needed for the higher population. The higher population would also require one high school, whereas the lower population likely would not generate demand for one. The estimated land required for all schools and indoor recreation facilities, as well as fire halls, is 30 to 73 hectares.

Land required for retail uses

According to the County's 2010 Retail Market Analysis, there is an average of 2.8 square metres of retail space in the county for every resident. If this ratio remains constant over the long term, a new community with a population of 15,500 to 33,100 would demand 43,400 to 92,680 square metres of new retail space. This translates to 17 to 37 hectares of net retail land, based on a retail density of 2,500 square metres per hectare. Inflating these figures by 40% to account for infrastructure to service the land, the gross retail land requirement is 24 to 52 hectares.

Land required for industrial and office development

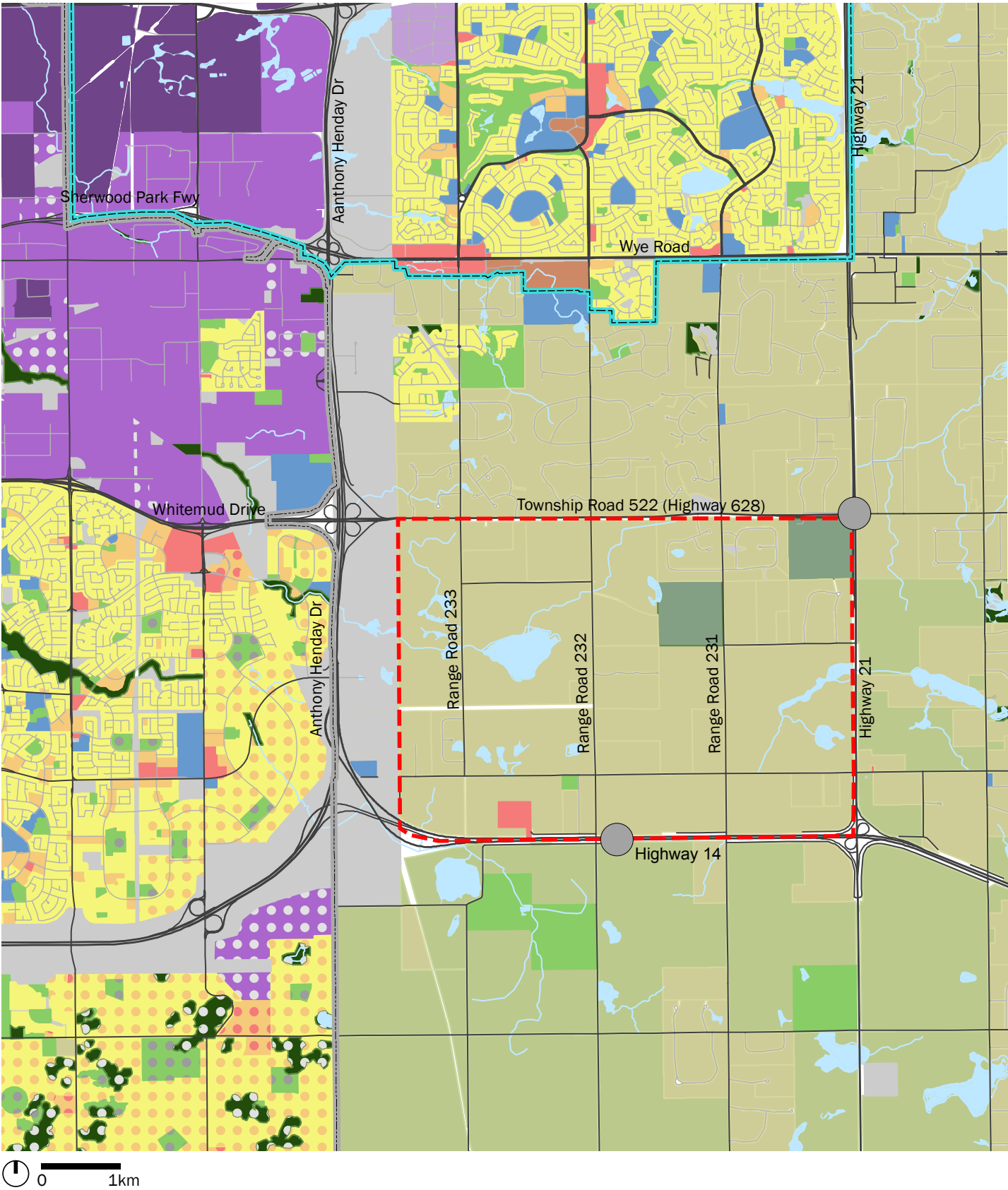
The 2013 Industrial Lands Strategy concluded that Strathcona County would likely require 178 hectares of additional industrial land to meet the projected need over the next 30 years. Since then, industrial uses have been proposed for the 570 hectares that comprise the Transition Urban Reserve Policy Area, north of Sherwood Park. In addition, in 2013, the County initiated a study of the opportunity for employment uses on 874 hectares on the south side of Highway 16, across from the Urban Reserve Policy Area, designated the Development Expansion Area. Because of this industrial land capacity in the county, while areas in Colchester may be suitable for office and light industrial uses and it is desirable to plan for some such uses to create a complete community, there is no specific target for business park and light industrial uses in Colchester. There is also no need to plan for medium or heavy industrial uses in Colchester.

Table 2.2
Land Requirements for a New Urban Community

Use		Land Required (ha)			
		6,200 dwelling units		13,240 dwelling units	
		30 du/nrha*	40 du/nrha	30 du/nrha	40 du/nrha
Residential	Net Residential	206	155	441	331
	Total Gross Residential (net x 1.5)	309	233	662	497
Retail	Net Retail	17		37	
	Total Gross Retail (net x 1.5)	24		52	
Parkland	Neighbourhood Parks	23		50	
	Community Parks	31		66	
	County-Wide Parks	62		132	
	Total Gross Parkland	116		248	
Community Facilities	Indoor Recreation Facilities	5		15	
	Schools	24		56	
	Fire Stations	1		2	
	Total Gross Community Facilities	30		73	
Total Development Land Required		479	403	1035	870

*du/nrha = dwelling units/net residential hectare

Figure 2.3
The Colchester Area in Context



Colchester is located 3.2 kilometres south of Sherwood Park, separated by an area of country residential subdivisions, and 0.8 kilometres east of the City of Edmonton. To the south and east of Colchester is primarily agricultural and undeveloped land. The area of southeast Edmonton due west of Colchester is known as the Meadows. The planning framework for this area is the Meadows Area Structure Plan (ASP). This community is a developing residential area with commercial and retail services. It will be home to nearly 61,000 people when completed. The area south of the Meadows and southwest of Colchester is comprised of the Decoteau ASP. This community will be largely residential with some commercial and employment uses, and will be home to almost 75,000 people when completed. The Maple Ridge Industrial ASP is north of the Meadows, containing largely industrial uses.

Total urban land required to 2044

Adding the land required for residential, community and retail uses together, the total requirement varies from 403 hectares, based on 15,500 people at 40 units per net residential hectare, to 1,035 hectares, based on 33,100 people at 30 units per net residential hectare (see Table 2.2). With a total of 2,291 hectares of land, the Colchester area can accommodate the County’s urban growth to 2044 and beyond, even in a high growth scenario.

Context Legend

- | | |
|---|--|
|  Watercourse |  Existing Protected Area |
|  Water Body |  Parks, Open Space & Recreation |
|  Agriculture |  Utilities |
|  Residential (Country/Rural) |  Residential (Planned) |
|  Residential (Estate/Low Density) |  Mixed Residential/Commercial (Planned) |
|  Residential (Medium/Density) |  Industrial Non-Heavy (Planned) |
|  Residential (High Density) |  Environmental Reserve (Planned) |
|  Mixed Use Urban Village |  Parks, Open Space & Recreation (Planned) |
|  Commercial (General/Retail) |  Colchester Study Area |
|  Commercial (Low Intensity/Business) |  Sherwood Park |
|  Industrial Light/Medium |  County Boundary |
|  Industrial (Heavy) | |
|  Institutional | |
|  Environmental Reserve | |

3 Plan Area

Plans for a new community must respond appropriately to the area's natural and built environment. The growth management strategy for Colchester recognizes the features and uses that define the area today. This section describes existing conditions as well as the infrastructure surrounding the area to which future development would need to connect.

3.1 Natural Features

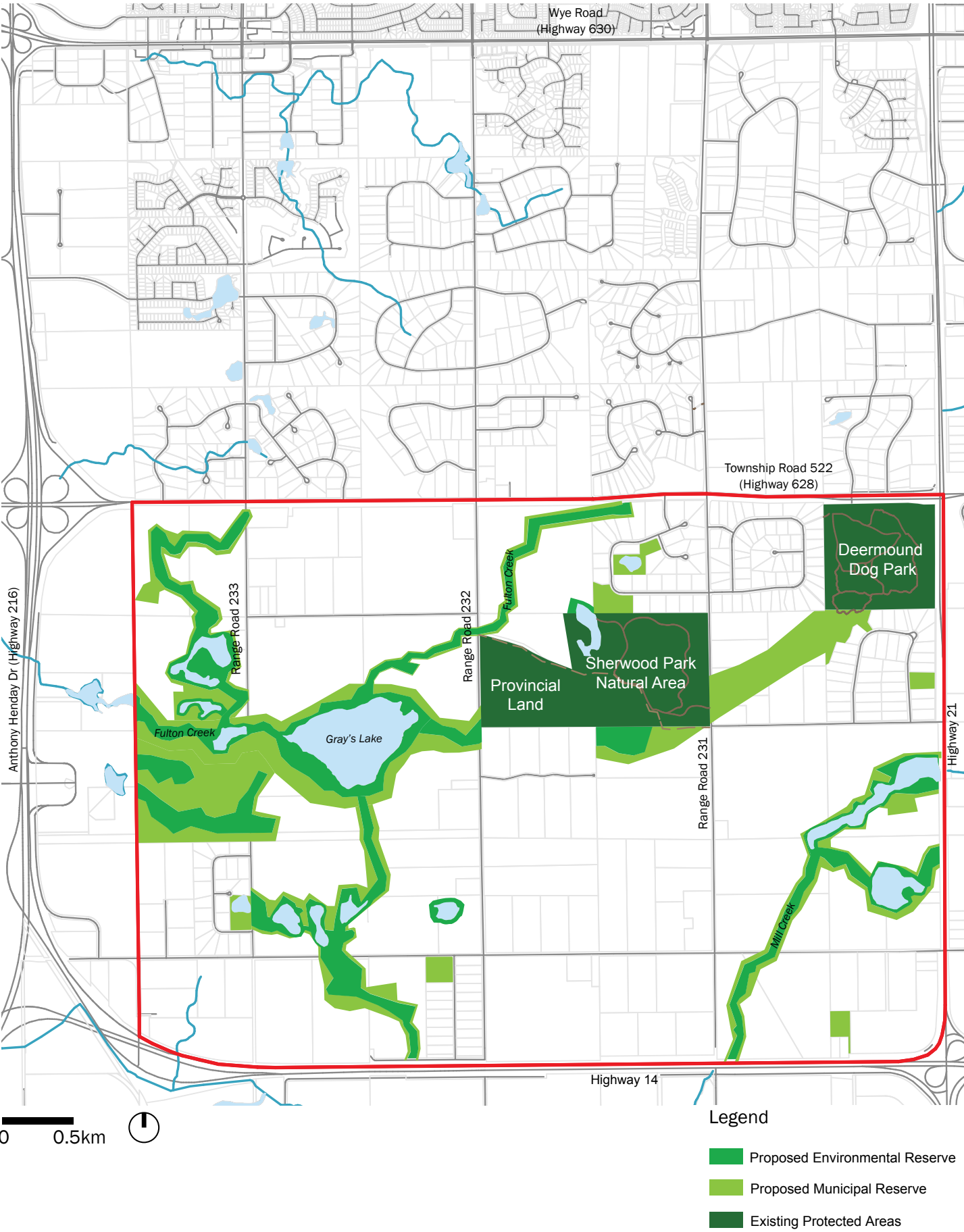
The Colchester area contains a number of significant environmental features that warrant protection. Strathcona County completed a biophysical assessment of Colchester to identify the priority environmental features to be protected through dedication as Environmental Reserve (ER) under the Municipal Government Act (MGA), as well as other features that the County should strive to protect using its Municipal Reserve (MR) dedication. The assessment included a site survey, a desktop study of previous environmental reports, a review of historical air photos and site visits.

The significant natural features in Colchester identified for conservation as Environmental Reserve (see Figure 3.1) include Gray's Lake, Fulton Creek, Mill Creek, several creek tributaries, as well as numerous wetlands and wetland complexes. Areas identified for protection as Municipal Reserve primarily consist of upland forested habitat that would create buffers around environmental reserves as well as conserve important wildlife, drainage and landscape connections. As the biophysical assessment identified only priority areas for protection, it is anticipated that additional areas to be dedicated as Environmental Reserve will be identified as more detailed planning is undertaken.

Two areas of Colchester are already protected for their natural and recreational value: the Sherwood Park Natural Area, which is provincially owned, and Deermound Dog Off Leash Park, which is owned by Strathcona County. These areas would remain as Colchester is developed, and should be linked and integrated into a larger environmental network in the new community. An additional parcel of land west of the Natural Area is owned by the Province. Should there be an opportunity in the future, this land should be considered as a potential site for community facilities and as part of the open space network.

All but the extreme western edge of Colchester is located within the Beaver Hills/ Cooking Lake Moraine. An application for a UNESCO Biosphere Reserve Nomination for the Beaver Hills Moraine is currently underway, which is required to define the moraine's core, buffer and transition areas.

Figure 3.1
Natural Features



Biosphere reserves are organized into three interrelated zones: the core area, the buffer area, and the transition area. This zonation scheme is applied in many different ways to accommodate geographical conditions, sociocultural settings, available legal protection measures and local constraints. This flexibility can be used creatively and is one of the strongest points of the biosphere reserve concept, facilitating the integration of protected areas into the wider landscape.

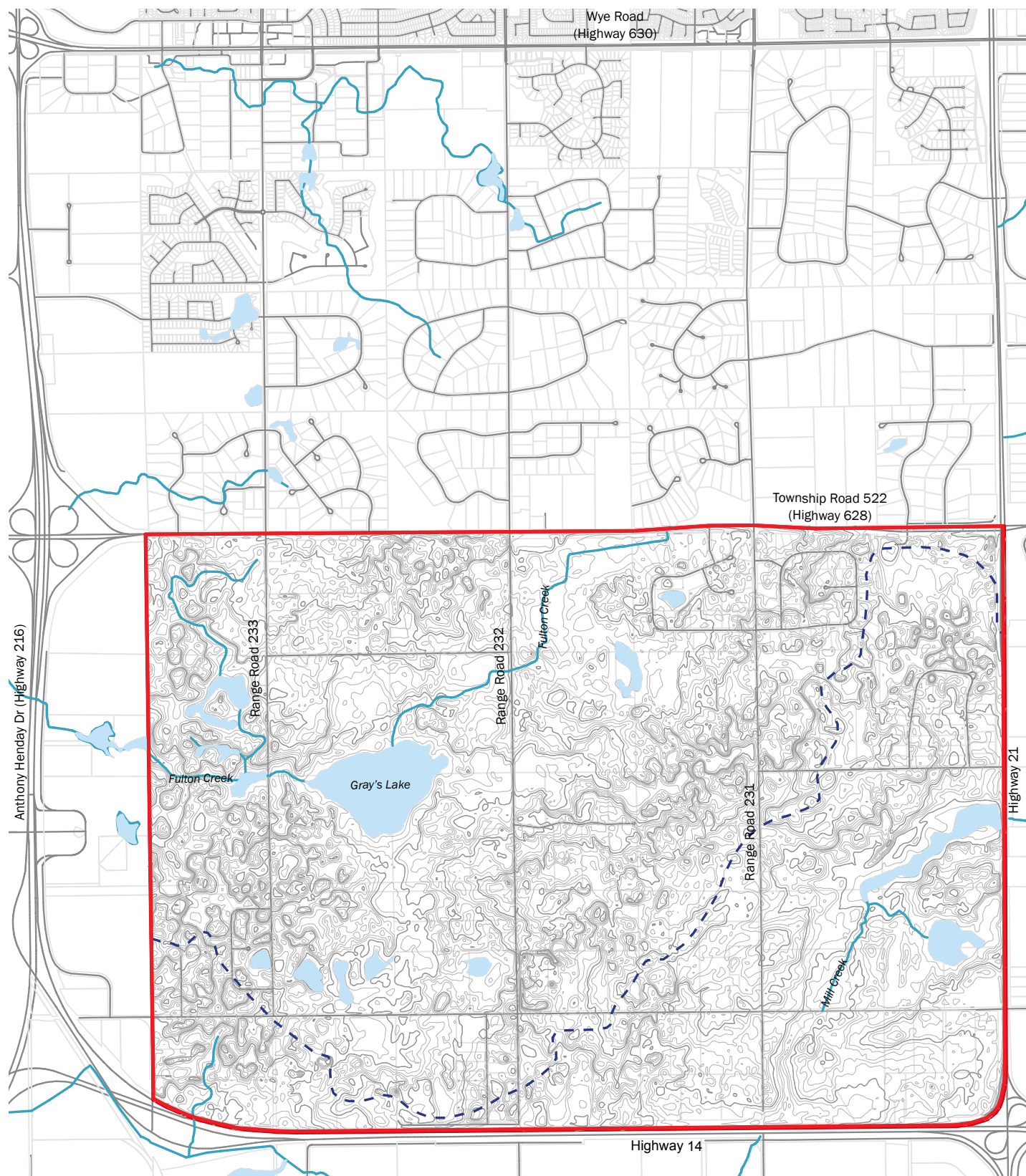
- Only the core area requires legal protection and can correspond to an existing protected area such as a national park.
- Buffer areas are peripheral to a specific protected area, where restrictions on resource use and special development measures are undertaken in order to enhance the conservation value of the protected area.
- Transition areas are peripheral to the core and buffer and are typically the largest component of the Biosphere – consisting of the living and working landscape. Local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests, and other stakeholders work together to manage and sustainably develop the area's resources.

The portion of Colchester within the moraine is part of the transition zone, except for the Sherwood Park Natural Area, which is defined as a buffer zone.

3.2 Topography

Figure 3.2 shows the topography of the Colchester area, which consists of a hummocky moraine landscape characterized by undulating hills and many wetlands due to internal (trapped) drainage. A minor ridge runs diagonally through the area from northeast to southwest, with two-thirds of the land falling within the Fulton Creek basin to the northwest, and the remainder to the Mill Creek basin in the east and south. The relief ranges from an elevation of 750m in the northeast, to 718m in the southwest near Highway 14 and the TUC. Relatively flat ground areas are generally adjacent to the significant wetlands along Fulton Creek in the centre-west, as well as adjacent to the wetlands along Mill Creek in the east.

Figure 3.2
Topography



Legend

- 1m Contour
- 5m Contour
- - - Drainage Divide

3.3 Agricultural Soils Capability

The quality of soils for agricultural purposes in Alberta is described through a soil capability classification based on Agriculture and Agri-Food Canada’s Soil Capability Classification of Agriculture. This classification system determines the characteristics of soils through a soil survey and the rating of soils is typically referred to in the preparation of land use plans.

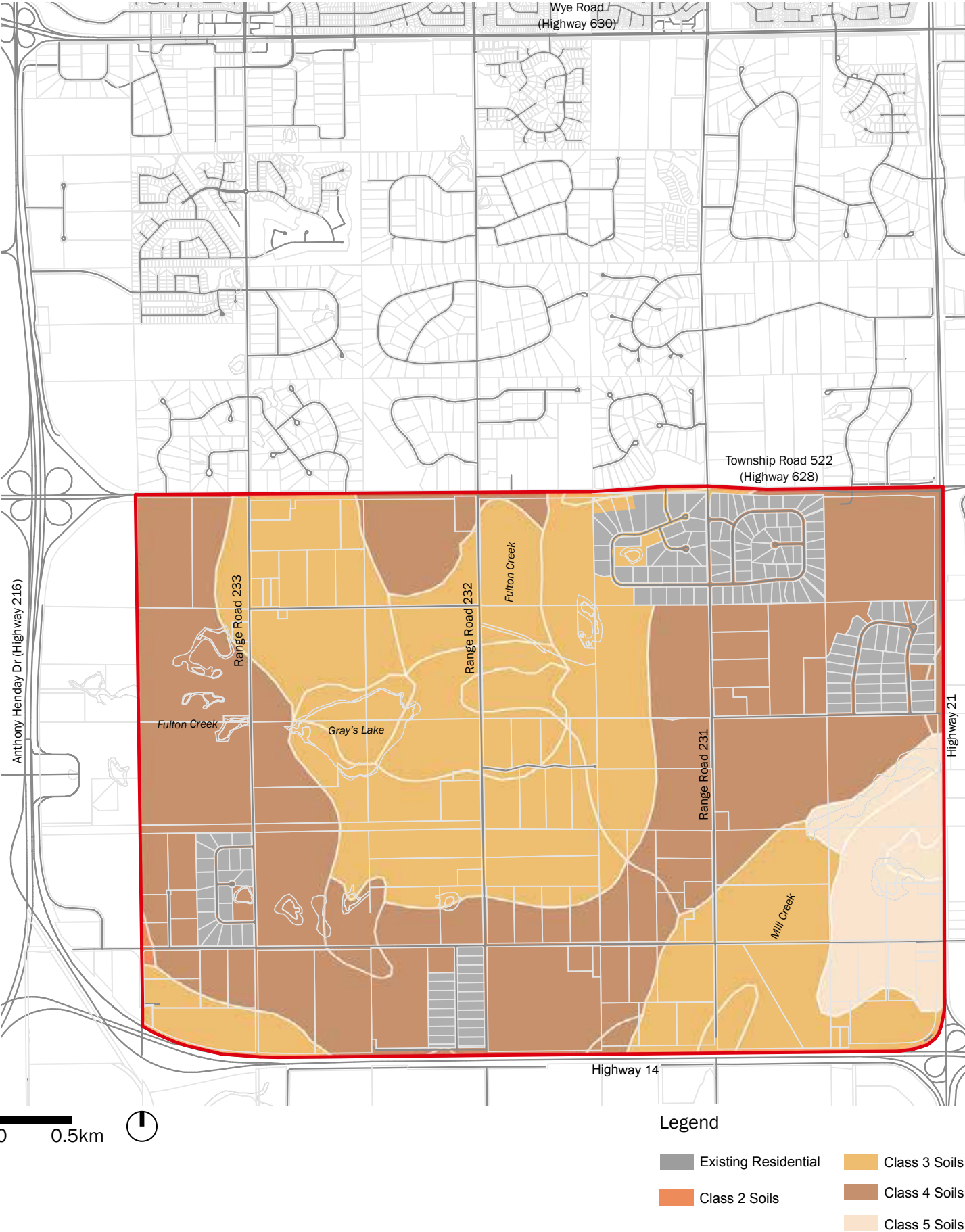
Of the 2,291 hectares of land within Colchester, the majority is designated as Class 3 (952.4 ha) and Class 4 (1,184.2 ha). There is a small area of Class 5 in the southeast corner (151.6 ha). Class 3 soils have moderately severe limitations that restrict the range of crops or require special conservation practices, and Class 4 soils have severe limitations that restrict the range of crops or require special conservation practices, or both. Class 5 soils are capable only of producing perennial forage crops.

Due to the low quality of soils, agriculture in Colchester has traditionally consisted of dairy farming and limited crop production. Table 3.1 and Figure 3.3 summarize the classification of land within Colchester.

Table 3.1
Agricultural Soils Capability

Approximate Area		
Soil Classification	Area (ha)	Area (%)
2	2.9	0.1
3	952.4	41.6
4	1,184.2	51.7
5	151.6	6.6

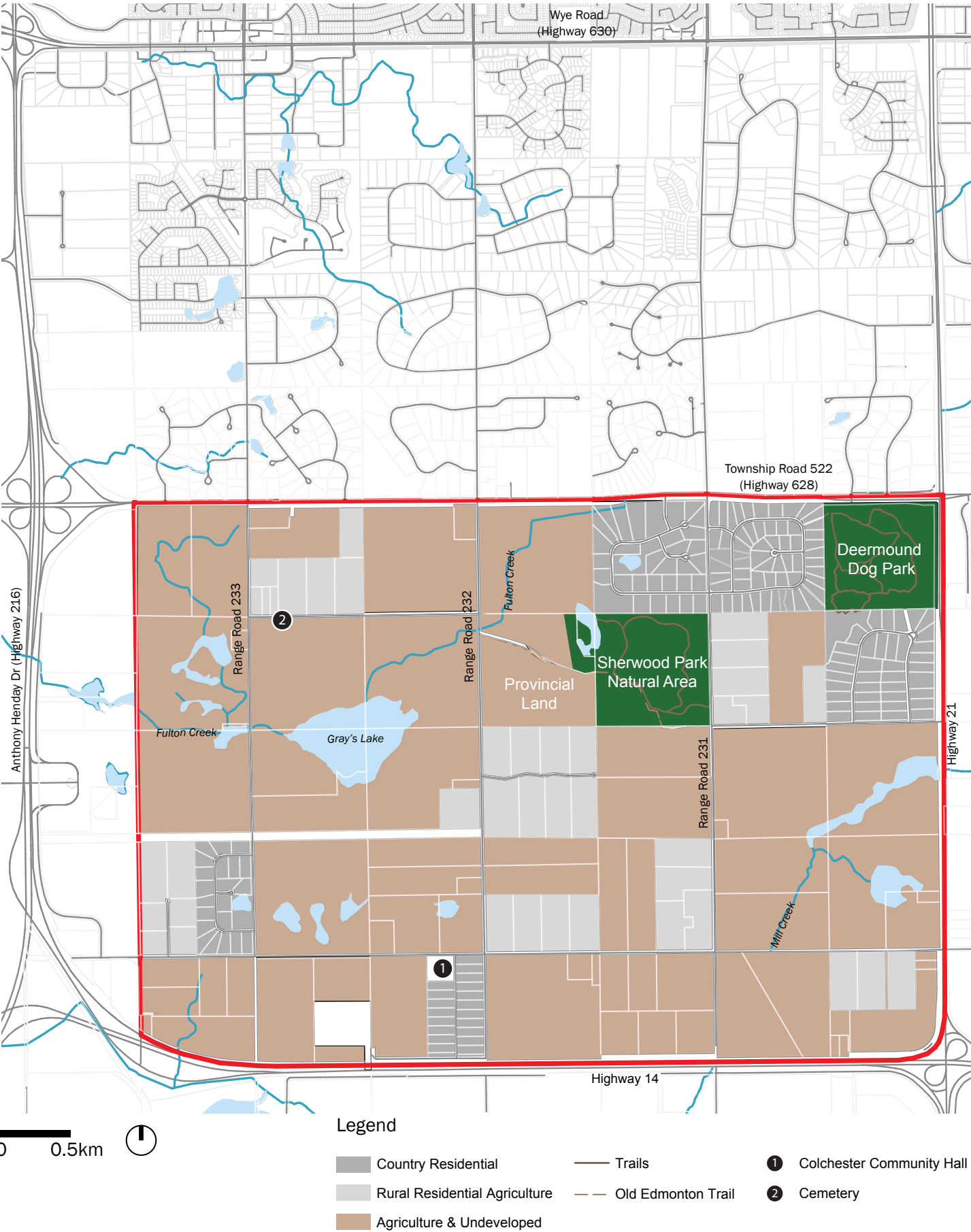
Figure 3.3
Agricultural Soils



3.4 Existing Development

Today Colchester largely consists of rural residential and agriculture uses (see Figure 3.4). There are five existing country residential subdivisions: Lynley Ridge, Roseburn Estates, Silver Birch Hills, Trevithick Park, and Waterton Estates. These are not anticipated to redevelop during the lifetime of the Colchester Growth Management Strategy, and are therefore shown as they are today in the community design concept for Colchester. The site also contains other large lot rural residential developments including Colchester Lane and Camelot Square which are anticipated to redevelop. There are currently two protected recreational areas in Colchester, the Sherwood Park Natural Area and Deermound Dog Off Leash Park, and one community facility, Colchester Community Hall, which is surrounded by several baseball diamonds. The Colchester Cemetery is also located within the site. The cemetery and recreational amenities have been incorporated into the concept for Colchester.

Figure 3.4
Existing Development



3.5 Pipelines and Risk Management

Numerous pipelines run through the Colchester area and will pose significant development constraints (see Figure 3.5). Natural gas pipelines run along Highway 21, halfway between Highway 21 and Range Road 231 and along the western border of the site through the Transportation Utility Corridor (TUC), continuing west along Highway 14 before dipping south of the highway between Range Road 233 and Range Road 232. A major high vapour pressure and product pipeline corridor with seven pipelines runs diagonally through the site from the northwest to the southeast, with one pipeline branching off about halfway through and heading south. The required setbacks from pipelines are established and regulated by the Alberta Energy Regulator (AER), and are determined by the specific content of the pipeline. Strathcona County has also established proposed setbacks from oil and gas infrastructure and land use activities through its Cumulative Risk Assessment.

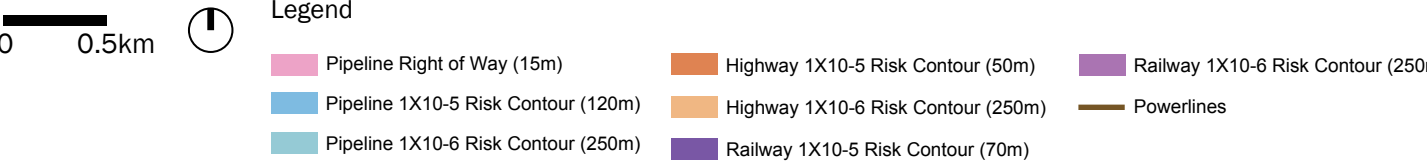
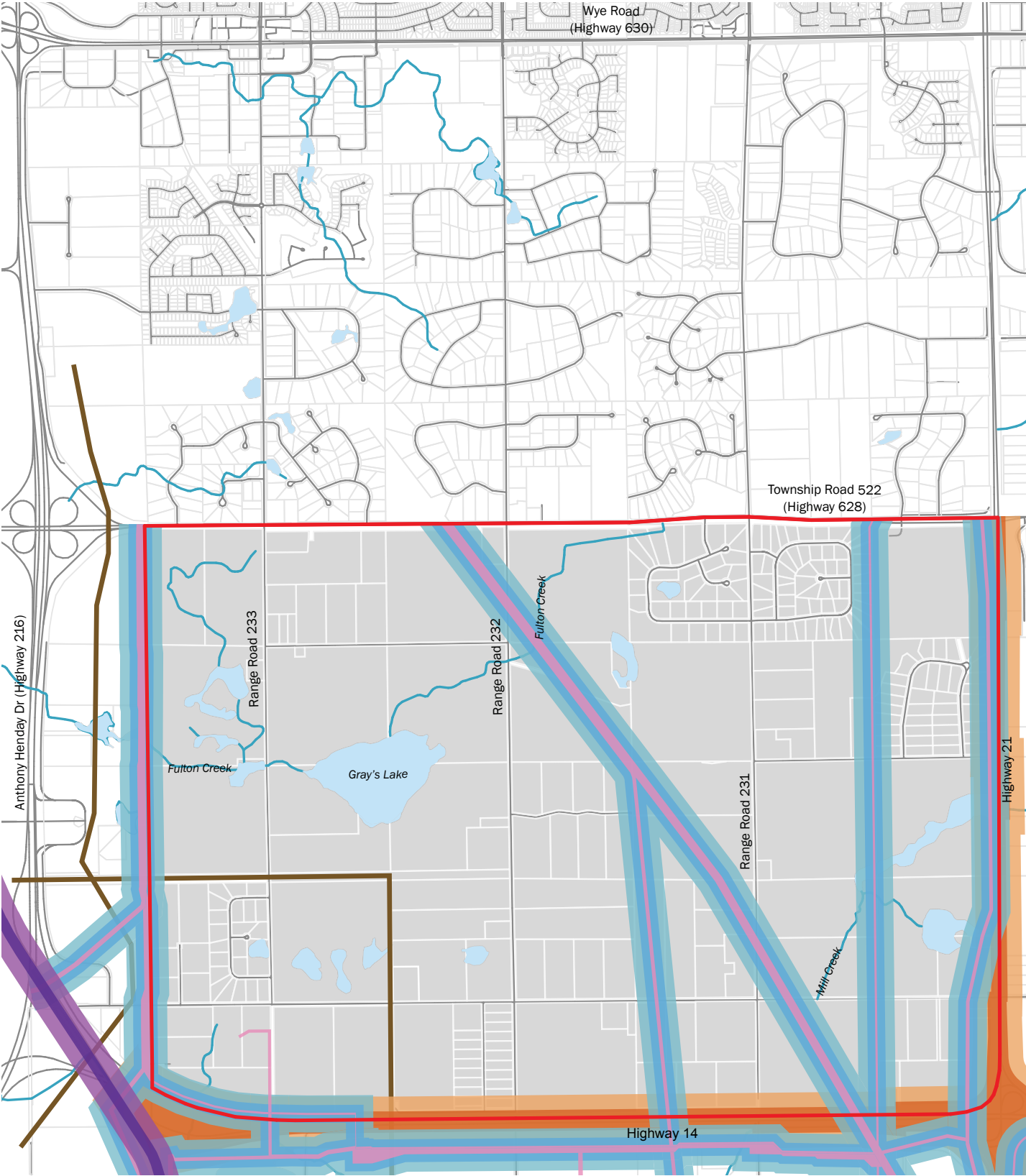
Strathcona County has not yet implemented a risk overlay from pipelines, but has a long history of using land use planning policy to manage risks associated with heavy industrial development adjacent to Sherwood Park. The Heavy Industrial Transition Overlay (IHO) within the Land Use Bylaw restricts the uses permitted within a certain distance of the heavy industrial uses in the heavy industrial area in the western portion of Sherwood Park. Strathcona County's IHO in the Land Use Bylaw is based on the Major Industrial Accidents Council of Canada (MIACC) standard for cumulative risk assessment. These guidelines, originally created by MIACC,

are now updated and monitored by the Canadian Society for Chemical Engineering Process Safety Management (CSCHE-PSM). The Capital Region Growth Plan requires that risk management assessments be undertaken for all existing and future sites of petrochemical clusters, and that the standard for risk management assessment shall be the standard established by MIACC.

Strathcona County is currently exploring the possibility of creating an overlay for the growth areas which would impose restrictions based on MIACC for pipelines. Consideration has also been given to implementing an overlay for highways and railways, due to the risks posed by hazardous substance transportation on these routes. In the field of risk management, risk is typically expressed as the likelihood of a fatality arising from an event within the span of a year. The 1×10^{-6} contour represents the societally acceptable level of risk related to an industrial accident. This represents the risk levels imposed on the public from industrial operations, and does not represent any risks of long term health impacts or damage to the environment.

Strathcona County's Cumulative Risk Assessment for the heavy industrial area identifies two risk management buffers which are implemented in the Land Use Bylaw as the Heavy Industrial Transition Overlay (IHO): a 1.5 km IHO buffer representing a 1×10^{-5} , or a 1 in 100,000, chance of a fatality and a 3.0 km buffer representing a 1×10^{-6} , or a 1 in 1,000,000, chance of a fatality within one year.

Figure 3.5
Pipeline, Highway and Railway Risk Contours



3.6 Transportation Infrastructure

A separate Cumulative Risk Assessment was undertaken for pipelines, highways and railways in the Colchester area based on MIACC. Figure 3.5 shows a total buffer zone of 250 metres from the pipeline right-of-ways, which is broken down into a 120 metre buffer for a 1×10^{-5} risk contour, and an additional 130 metres for a 1×10^{-6} risk contour. For highways, the 1×10^{-5} risk contour would be 50 metres, but the total buffer zone for the 1×10^{-6} risk contour would still be 250 metres. Figure 3.5 shows the 1×10^{-5} and 1×10^{-6} risk contours for pipelines, railways and highways in Colchester.

If Strathcona County decides to implement restrictions based on MIACC for pipelines, railways, and highways, this will mean a range of sensitive uses would be prohibited. Between the right-of-way and the 1×10^{-5} risk contour these include residential and institutional uses, some industrial uses, and many commercial uses, excluding retail. Between the 1×10^{-5} and 1×10^{-6} risk contours, some residential uses, institutional and industrial uses would be prohibited. In addition, a number of other uses would be discretionary within the overlay. These are typically commercial uses that could have higher occupancy.

The Colchester area is surrounded by major regional roadways on all four sides. Highway 14 is a high standard four-lane divided freeway that runs along the south edge of the site and connects with Highway 216 (Anthony Henday Drive), which runs approximately half a mile west of the western boundary of the site (on the far side of the Transportation Utility Corridor). Highway 216 is a multi-lane freeway that is part of the national highway system. Highway 21 is a major provincial highway which runs in a north-south direction along Colchester's eastern boundary and along the east edge of Sherwood Park; it provides an important high capacity linkage to Alberta's Industrial Heartland to the north and the Fort McMurray region through connection to other highways. Highway 21 is currently a two lane paved highway along the east edge of Colchester but widens to four lanes from just south of Highway 628 to the north through Fort Saskatchewan. It is likely that Highway 21 will be upgraded to four lanes at some point in the future. The northern edge of Colchester is bounded by Highway 628 which runs east-west and forms an extension of Whitemud Drive within the City of Edmonton. Highway 628 is currently two lanes wide from Highway 216 to Highway 21.

At present, access to/from the Colchester area is by way of at-grade intersections on Highway 628 at Range Roads 233, 232 and 231, as well as by way of at-grade intersections on Highway 21 at Township Road 520 and Township Road 521. The at-grade intersections on Highway 628 are controlled by traffic signals at Range Road 233 and at Highway 21; all other at-grade intersections are unsignalized but have stop signs on the minor road approaches to the highway. It is likely that as traffic conditions warrant, traffic signals would also be considered for the Range Road 232 and 231 intersections on Highway 628. Alberta Transportation has

completed a functional plan for the widening of Highway 628, but these plans did not contemplate urban development within Colchester.

The population capacity of Colchester will be limited by the number and type of access points provided to the new community. A transportation analysis of four different transportation infrastructure scenarios on Highway 628 was undertaken to determine the population that each could support. The transportation scenarios and corresponding population limits for Colchester are as follows:

Scenario 1: Three signalized intersections on Highway 628. This scenario would support a maximum population of 28,600.

Scenario 2: Five signalized intersections on Highway 628. Adding two additional signalized intersections between Range Roads 231 and 232 and Range Roads 232 and 233 would support a maximum population of 38,000.

Scenario 3: Three interchanges on Highway 628. Building three interchanges on Highway 628 at Range Roads 231, 232 and 233 would support a maximum population of 53,500, however it would be highly disruptive to surrounding existing country residential properties.

Scenario 4: Two intersections and one interchange on Highway 628. Combining one interchange on Highway 628 at Range Road 232 with two signalized intersections at Range Roads 231 and 233 would support a maximum population of 38,000. This scenario is inferior to Scenario 2 because it supports the same population but would cost more and create more disruption for surrounding existing country residential properties.

3.7 Water, Wastewater and Stormwater Servicing

The Colchester area is located within a reasonable distance from existing utility infrastructure, which allows for servicing options. Currently, Strathcona County receives water from EPCOR at the 34 Street/92 Avenue booster station location. Offsite wastewater servicing for the Colchester area can be provided by the Southeast Regional Trunk Sewer (SERTS), the upstream end of which is currently located 9.5 km north of Colchester at the junction of Anthony Henday Drive and Highway 16.

The Colchester area contains an extensive network of wetlands, which will create opportunities for natural approaches to stormwater management that utilize existing wetlands. There will be further opportunities for hybrid systems of natural and engineered facilities. Finally, Fulton and Mill creeks, along with their tributaries, can be used to convey controlled and treated stormwater discharges from the area.

4 Planning Process

The development of the Colchester Growth Management Strategy (GMS) involved four phases of work and regular public consultation. A comprehensive communications and public engagement plan was developed at the outset to ensure key stakeholders and County residents would have multiple ways to stay informed and provide input.



4.1 Phase One

To start the consultation process, in May 2015 interviews were carried out with key stakeholders from government, industry, community groups and other organizations. The purpose of the interviews was to inform stakeholders about the project and hear their thoughts and aspirations about a new community in Colchester. The list of stakeholders interviewed included representatives from:

- Strathcona County Council
- Alberta Transportation
- City of Edmonton
- Elk Island Public School Board
- Elk Island Catholic School Board
- Local development industry
- Local business community
- Utility providers
- Non-profit housing providers
- Community groups

On the evening of May 13, 2015, a landowners' meeting was held to inform landowners in Colchester and their representatives about the growth management strategy (GMS) initiative and to get input for the development of a vision and principles for Colchester. A presentation on the project purpose, timeline and process was given twice, followed each time by a question and answer period. Landowners within Colchester were sent letters of invitation to the meeting, and 66 attended.

The landowners' meeting was followed by an open house the next evening, May 14, 2015, where the same information was presented. Landowners adjacent to Colchester were sent letters of invitation to the open house, and it was also advertised through the Sherwood Park News, the County's digital display boards and project website, and a media release. The open house was attended by approximately 90 people.

4.2 Phase Two

In June 2015, a one-day design charrette was held with County staff, including members of a Technical Advisory Committee. The participants were split into three groups and asked to develop community design concepts for Colchester, having consideration for the preliminary vision and principles that had been developed from public feedback in May, the technical opportunities and constraints for development in Colchester, and best practices in community design. The outcomes from the charrette informed the development of three initial community design concepts for a new community. These were then evaluated based on the extent to which they achieved the vision and supported the principles, and the strongest features of each were incorporated into a draft community design concept. The initial concepts and draft community design concept were presented at three events held in September

and October 2015: a roundtable with the local development community on the afternoon of September 30, 2015 a landowners' meeting on the evening of September 30, 2015 and a public open house on the evening of October 1, 2015.

The landowners' meeting and open house were publicized using the same methods used for previous events. For the developers' roundtable, members of the local development community were invited, and a general invitation was also extended through the local chapter of the Urban Development Institute. Approximately 49 people attended the landowners' meeting and 51 people attended the open house. Eleven people representing nine development companies attended the developers' roundtable.



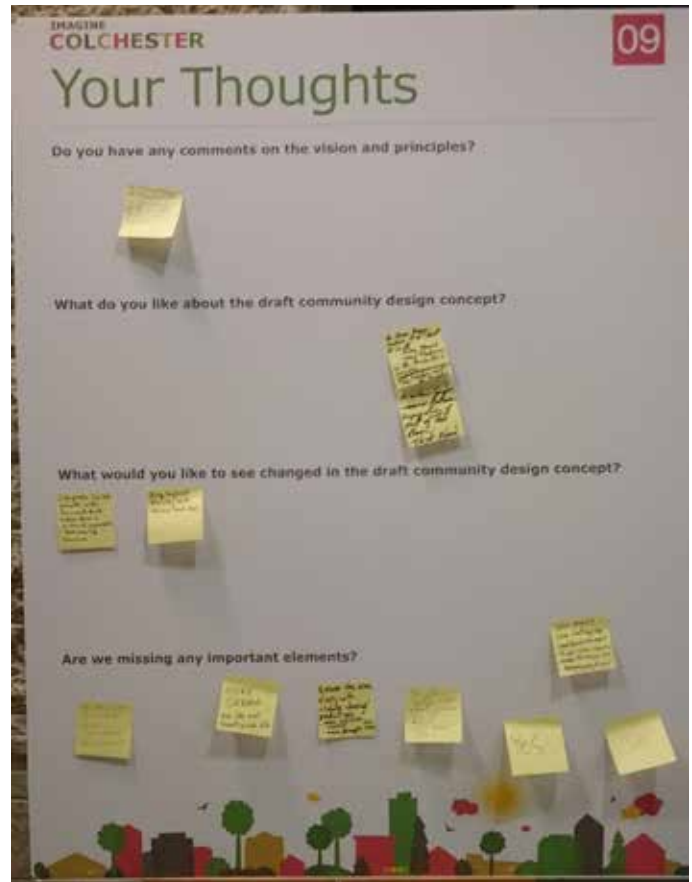
Community design concepts produced by groups at the charrette.



4.3 Phases Three and Four

A draft recommended community design concept was developed based on the feedback from the consultation events in Phase 2. Preliminary policy directions were also created to provide guidance on how to achieve the vision and principles for Colchester. The concept and policy directions were presented at a landowners' meeting on November 25, 2015, which was attended by 47 people, and a public open house on November 26, 2015, which was attended by 55 people.

In the final phase of the project, feedback from the open house and landowners' meeting informed the finalization of the community design concept and preparation of the Colchester Growth Management Strategy. The final document will be presented to County Council at a public meeting in early 2016.



5 Vision and Principles

An overarching vision and seven guiding principles for a new community in Colchester emerged from the consultations held in May 2015. The resulting vision and principles were presented at a landowners meeting on September 30th and a public open house on October 1st, 2015. They are rooted in the concept of sustainable development, which is at the heart of the County's Municipal Development Plan. In broad terms, this means that development in the new community in Colchester should be environmentally and fiscally responsible and support social well-being and cultural diversity.

5.1 Vision

Colchester will be a **unique community** distinguished by the area's moraine landscape.

Development will respect Colchester's natural features and **connect people to the environment**.

Direct road, transit and trail links will **integrate the community** with its surroundings and the larger region.

Colchester will be a **welcoming community**, providing affordable and diverse housing options for all who choose to live there as well as mixed use centres and a variety of community spaces for people to come together.

5.2 Principles



1 Acknowledge and Respect Colchester's Rural Heritage

Colchester's history as an early settlement area in the County should be reflected in a new urban community. Physical remnants of the past such as the Colchester Cemetery and Old Edmonton Trail should be incorporated into future development and used as an educational resource about the history of the area. Existing country residential properties should be sensitively integrated into the future fabric of Colchester with appropriate transitions from adjacent development.

2 Integrate and Conserve the Natural Environment

Development should respect Colchester's location within the Beaver Hills Moraine and demonstrate good environmental stewardship of the land. The community should be structured around and conserve Colchester's significant natural features, including Gray's Lake, Fulton Creek, Mill Creek and significant wetlands. The existing Sherwood Park Natural Area should be linked to this environmental network to create a visible and accessible amenity. Colchester should incorporate best practices in conservation and sustainable development, including low impact development approaches to stormwater management. Innovative green design, energy efficient technologies, and high quality and enduring materials should be used in new development.



3 Support the Local and County Economies

A thriving retail and services sector in Colchester should both provide jobs for residents and ensure people are able to meet their daily needs close to home. Key locations within Colchester should be designated for employment uses that support the local and County economies. Space should be provided to accommodate Strathcona County's growing professional services sector as well as other office uses. Affordable space should be provided for small businesses, encouraging entrepreneurship within the community. Colchester should also be highly integrated with other key employment nodes, so that residents have easy access to job opportunities throughout the region.

4 Provide Diverse Housing and Neighbourhoods

Colchester should be a community that has a place for everyone – all ages, incomes, cultures, and levels of ability. The range of housing types and ownership models should be desirable and marketable and support a diversity of residents. This includes different forms of housing such as apartments, townhomes, and single family homes, both rental and ownership opportunities, affordable housing, and the incorporation of existing country residential acreages. People at all stages of the life cycle should be able to meet their housing needs in Colchester, and everyone who works in Colchester should be able to find affordable accommodation in the community. Each neighbourhood should include a variety of housing types, densities and architectural styles, creating interesting and distinctive streetscapes.



5 Establish Mixed-Use Centres

The residential neighbourhoods of Colchester should be built around mixed-use centres where higher density housing, retail, services and community facilities come together in a compact and walkable form. These focal points will be where community centres, public squares and cultural amenities are clustered. There should be a strong emphasis on design and placemaking in mixed-use centres, with wide sidewalks, attractive landscaping and high quality public spaces incorporated throughout.



6 Provide Transportation Choice

Colchester should feature a highly interconnected street network and “complete streets” that are designed to accommodate all modes of transportation. Residents should have the choice to travel by walking, cycling or transit as well as by car. An efficient transit system that provides connections both locally and regionally should be supported by mixed-use and higher density areas. A comprehensive trail network should link open spaces and natural features within the community and creative use should be made of pipeline corridors as space for recreational trails. Trail networks should also extend beyond Colchester to connect to other trail networks in the County and Sherwood Park.



7 Create a Healthy and Fun Community

The indoor and outdoor recreation opportunities in Colchester should contribute to the high quality of life for which Strathcona County is known. Enjoyment of and appreciation for nature within an urban context should be central to the identity and design of the new community. The Sherwood Park Natural Area, Deermound Dog Off Leash Park and other significant natural features should be complemented by additional high quality outdoor recreation space. Neighbourhoods should incorporate community spaces and provide visible and accessible amenities such as playgrounds, sports fields, picnic areas, walking trails and skating rinks. All outdoor public spaces should be designed for four season use. Indoor community spaces should include recreation facilities and spaces that foster arts, culture and creativity such as libraries and theatres.

6 Community Design Concept

This section describes and illustrates the recommended community design concept for a new community in Colchester. The concept is a high-level plan intended to provide the basis for an Area Concept Plan and guide subsequent, more detailed plans for development, including Area Structure Plans.

6.1 How the Concept was Developed

The recommended community design concept is the culmination of a process that involved the development of three initial community design concepts, a draft community design concept and a draft recommended community design concept. The three initial concepts explored the possibilities for Colchester using the transportation infrastructure on Highway 628 and corresponding maximum populations from Scenarios 1, 2 and 3 of the transportation analysis. They were evaluated based on the vision and principles, and their best features were combined to create the draft community design concept. The draft concept was presented to the public in September/October 2015 and refined based on public feedback to create the draft recommended concept. The public was invited to comment again in November 2015, after which the recommended community design concept was finalized.

All three initial concepts supported the vision and principles for a new community to varying degrees of success, and shared the following characteristics:

- Conservation of the Sherwood Park Natural Area, other Provincial land, and Deermound Dog Off Leash Park;
- Existing country residential subdivisions maintained;
- Mix of housing types within neighbourhoods;
- Interconnected environmental and open space network;
- Grid of primary roads;
- Highway 628/Township Road 522 as the major entry/exit route;
- Multiple mixed-use centres;
- Employment lands on Highway 14;
- Pipeline setbacks used as green corridors.

Legend




























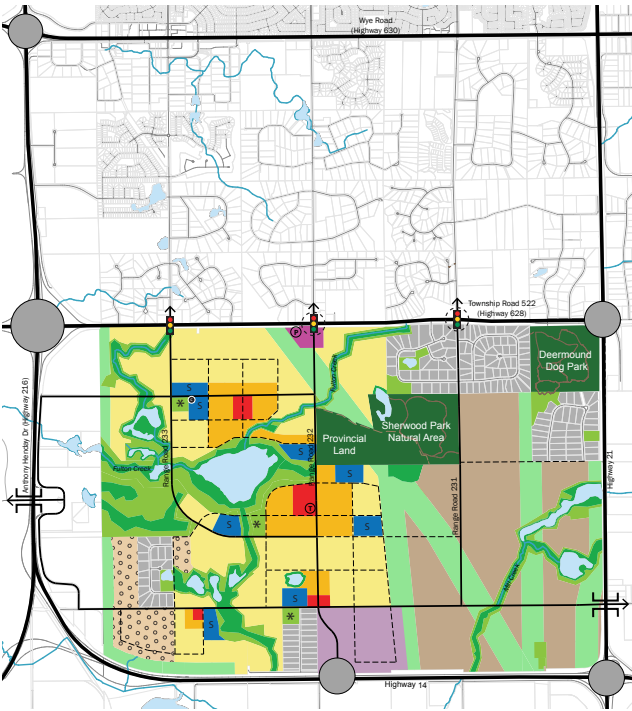
 Existing Residential	 Schools	 Undeveloped Area	 Cemetery
 Low Density Residential	 Institutional	 Lakes	 Transit Station
 Country Residential	 Community Centre	 Streams	 Park & Ride
 Medium Density Residential	 Existing Protected Areas	 Old Edmonton Trail	 Traffic Signal
 Mixed-Use Centres	 Municipal Reserve	 Arterial Roads	
 Town Centre Commercial Core	 Environmental Reserve	 Collector Roads	
 Business Park Area	 Pipeline Corridors (With setbacks for sensitive uses)	 Interchange	
 Major Retail Area		 Highway Flyover	

Figure 6.1
Concept A: Small Town Centre

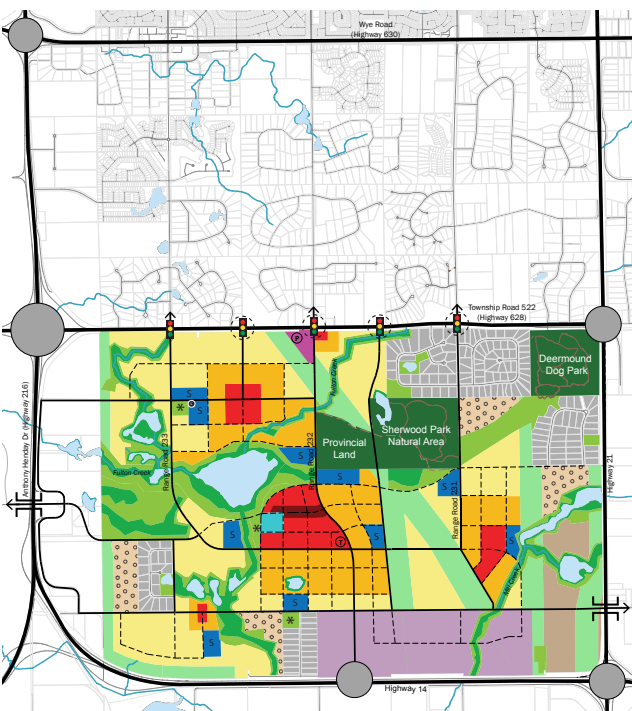


Concept A was designed to use the existing transportation configuration on Highway 628, with the only difference being the signalization of the intersections at Range Roads 231 and 232. The transportation analysis concluded that this configuration could support a population of approximately 28,000. Development in this concept is concentrated to the west of the major pipeline corridor. With its relatively low density, small mixed-use centres, and large percentage of low-density residential neighbourhoods, Concept A is the closest of the three concepts to Sherwood Park today.

Table 6.1 Concept A Statistics

Population	28,700 people
Net Residential Density	30 du/nrha
Dwelling Units	10,800 units
Potential Employment	2,700 jobs

Figure 6.2
Concept B: Mid-Size Town Centre

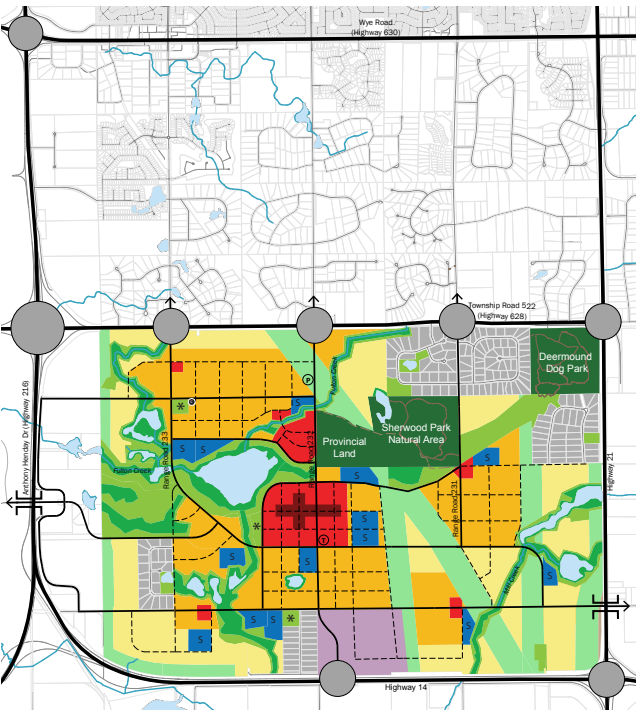


Concept B explores the potential of adding two new signalized intersections on Highway 628, resulting in a transportation configuration that can support a population of approximately 38,000. With its multiple mixed-use centres and large business park, Concept B accommodates the most jobs of the three concepts. With a density of 35 du/nrha and a broad range of neighbourhoods from country residential to high-density, it offers the most diverse mix of housing unit types.

Table 6.2 Concept B Statistics

Population	39,600 people
Net Residential Density	35 du/nrha
Dwelling Units	15,800 units
Potential Employment	7,200 jobs

Figure 6.3
Concept C: Large Town Centre



Concept C features the highest population that can be accommodated in Colchester, requiring the construction of three interchanges on Highway 628. Unlike the other concepts, it does not contain any undeveloped land. It has the highest density of the three concepts and the largest percentage of medium- and high-density neighbourhoods.

Table 6.3 **Concept C Statistics**

Population	51,000 people
Net Residential Density	40 du/nrha
Dwelling Units	20,500 units
Potential Employment	4,900 jobs

Table 6.4 compares the three concepts for Colchester, assessing them against the seven principles established for the new community. Concept B performed the best of the three concepts in regard to the principles. Its major structuring features in terms of the transportation network and land use structure provided the basis for the draft community design concept, which supported a population of 38,600 at a density of 31 du/nrha and 4,600 jobs.

- ✓ = Good
- ✓✓ = Better
- ✓✓✓ = Best
- = Does not fully meet principle

Table 6.4 **Evaluation of the Concepts**

Principle	Concept A	Concept B	Concept C
Acknowledge and Respect Colchester’s Rural Heritage	✓✓	✓✓✓	-
Integrate and Conserve the Natural Environment	✓✓	✓✓	✓✓
Support the Local and County Economies	✓	✓✓✓	✓✓
Provide Diverse Housing and Neighbourhoods	✓	✓✓✓	✓✓
Establish Mixed-Use Centres	✓	✓✓✓	✓✓
Provide Transportation Choice	✓✓	✓✓✓	✓
Create a Healthy and Fun Community	✓✓	✓✓✓	✓✓✓

Fiscal Impact Analysis

To assess the impact of each of the three initial concepts on the County's residential property tax rate, a fiscal impact analysis was undertaken. It concluded that the three concepts would have a very similar impact on the tax rate. The analysis took 2013 as the base year using the County's 2013 operating budget data and municipal tax rates, in order to perform an analysis that is comparable to the one that was completed for Bremner. It assumed that development in the Colchester area would not commence until 2020, and, based on population forecasts, projected that Concept A would be built out at the end of 2042, Concept B would be built out at the end of 2048, and Concept C would be built out at the end of 2053. The fiscal impact model assumed there would continue to be some residential development outside of Colchester in the county and considered the impacts of this growth, as well as the impacts of continuing to service existing development.

The model also assumed that industrial growth would continue at an average annualized rate in line with industrial growth in the County over the past 30 years.

Assessment projections were developed for each of the concepts, as well as projections of future soft capital requirements and hard infrastructure costs for Colchester. The analysis found that as the community grows in population, hard and soft infrastructure costs generally would be in line with increasing revenues from the development. At full build-out, the projected municipal tax rates are projected to be consistent with today's rate and vary by only 1.1% across the three concepts.

Since the fiscal impact analysis showed the three concepts to be very similar, it did not affect the development of the recommended concept.

6.2 Recommended Community Design Concept

In this section, the recommended community design concept is broken down and described by its structuring elements of land use, environment and open space, transportation, and servicing.

6.2.1 Land Use

The pattern of land uses in the recommended community design concept supports the development of a diverse community where parks, schools, shops and services are close to all neighbourhoods. Each component of the land use concept is intended to have somewhat distinct characteristics while complementing and supporting adjacent components.

- Low-density Neighbourhoods are intended to contain a mix of lower density housing comprised predominantly of detached dwellings (approximately 60%) but also semi-detached dwellings and duplexes (20%) and townhomes (20%).
- Medium-density Neighbourhoods are intended to accommodate a mix of low-rise housing, including townhomes (approximately 50%), detached dwellings (20%), semi-detached dwellings and duplexes (20%) and apartments in low-rise buildings generally up to four storeys (10%).
- Mixed-use Centres are intended for higher-density forms of housing, including apartments in low-rise buildings (approximately 50%), townhomes (30%) and apartments in mid-rise buildings up to nine storeys (20%). These areas would also accommodate small-format and mid-size retail and other commercial uses in standalone buildings or integrated with residential uses in mixed-use buildings.

- The Major Retail Area is intended primarily for large-format retail stores and other auto-oriented commercial uses that will complement but not compete with retail offerings in the Mixed-use Centres.
- The Business Park Area is intended for a range of employment uses and business types, including office buildings and light industrial uses. These areas are envisioned to contain businesses in sectors targeted for growth in the county, including health care, finance, and professional, scientific and technical services. However, since there are other large areas in the county planned or proposed for industrial and other employment uses, the build-out of the Business Park Area may take several decades.
- Institutional land is intended to be reserved for a major institution such as a college, university or healthcare facility, should one decide to locate in Colchester. Preferred locations for schools are identified near the open space system, but will have to be confirmed in consultation with the school boards as Area Structure Plans are prepared. Larger sites are appropriate for high schools or joint K-9 school sites.

Table 6.5 provides statistics associated with each of the land use designations. The numbers are not intended to be prescriptive but are based on assumptions tied to the principles for a new community in Colchester and the policy directions contained in the next section. For example, the mix of housing types across the community is consistent with the principle and targets for housing diversity, and the yields for the mixed-use centres assume a balance of housing and retail, with complementary office uses.

Figure 6.4
Land Use Concept

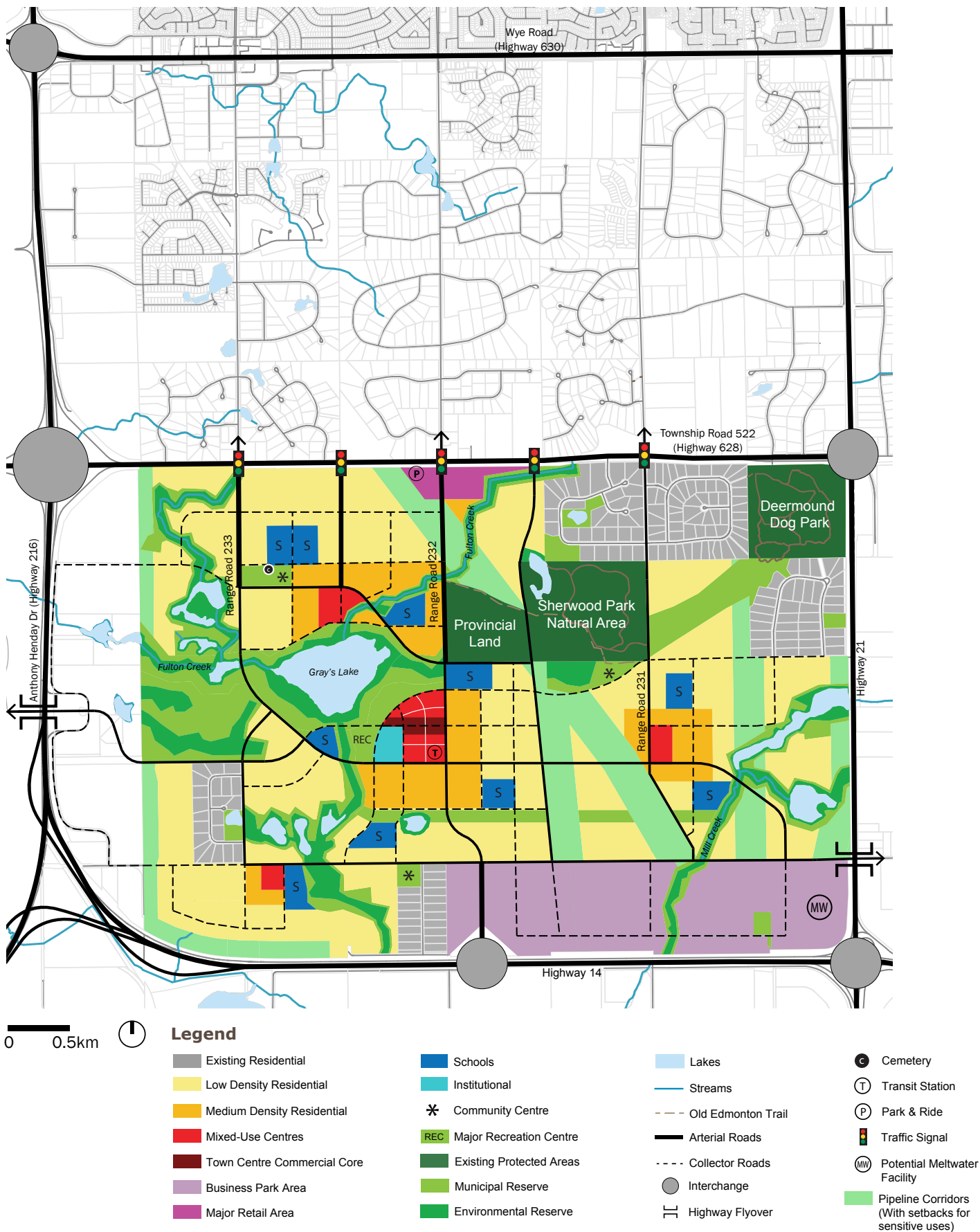


Table 6.5
Recommended Community Design Concept Statistics

Housing

Residential Land Use	Gross Land Area (ha)	Gross Land Area - ER (10%) ¹	Net Land Area (ha) ²	Housing Mix ³	Average Density (du/nrha)
Low Density	622	560	364	60/20/20/0/0	28
Medium Density	138	124	81	20/20/50/10/0	44
Mixed-use	42	37	12	0/0/30/50/20	90
Total	802	722	457		33

Residential Land Use	Total Units	Detached and Semis	Townhomes	Apartment Dwellings	Population ⁴
Low Density	10,200	8,200	2,050	0	27,900
Medium Density	3,600	1,400	1,800	300	8,950
Mixed-use	1,100	0	350	800	2,000
Total	14,900	9,600	4,200	1,100	38,850

Unit Mix by Typology

Housing Typology	Total Units	Unit %
Detached and Semis	9,600	64%
Townhomes	4,200	28%
Apartment Dwellings	1,100	8%
Total	14,900	

Parkland and Environmental Open Space

Employment Land Use	Land Area (ha)
Parkland ⁵	260
Environmental Reserve	160
Provincial Land	110
Deermound Dog Park	60
Total	590

Employment

Employment Land Use	Gross Land Area (ha)	Gross Land Area Additional ER (10%) ¹	Net Land Area (ha) ²	Retail GFA (sq. m.)	Office GFA (sq. m.)	Retail Jobs	Office Jobs	Industrial/ Office Jobs
Mixed-use	42	37	14	35,100	7,000	900	300	0
Major Retail	16	15	11	27,800	0	600	0	0
Business Park	219	197	140	0	0	0	0	5,000
Total	277	249	165	62,900	7,000	1,500	300	5,000
Total Jobs	6,800							

Community Facilities

Community Facilities	# of Facilities	Land Area
Schools	9 K-9	62 ha
	1 HS	
Other Institutions	1	7 ha
Major Recreation Centres	1	-
Local Community Centres	2	-
Library	1	-

- 1 – Due to the moraine landscape, an additional 10% of land was assumed to be required for ER
- 2 – Net land area excludes roads, utilities and stormwater management facilities. In Mixed-use Centres, land for stand-alone retail is also excluded.
- 3 – Housing mix expressed as percentages of detached / semi-detached & duplexes / townhomes / low-rise apartment dwellings / mid-rise apartment dwellings.
- 4 – Population estimates are based on 2.8 persons per detached/semi-detached home, 2.5 persons per townhome and 1.5 persons per apartment dwelling.
- 5 – Includes land for community centres.

Note: All figures are approximate.

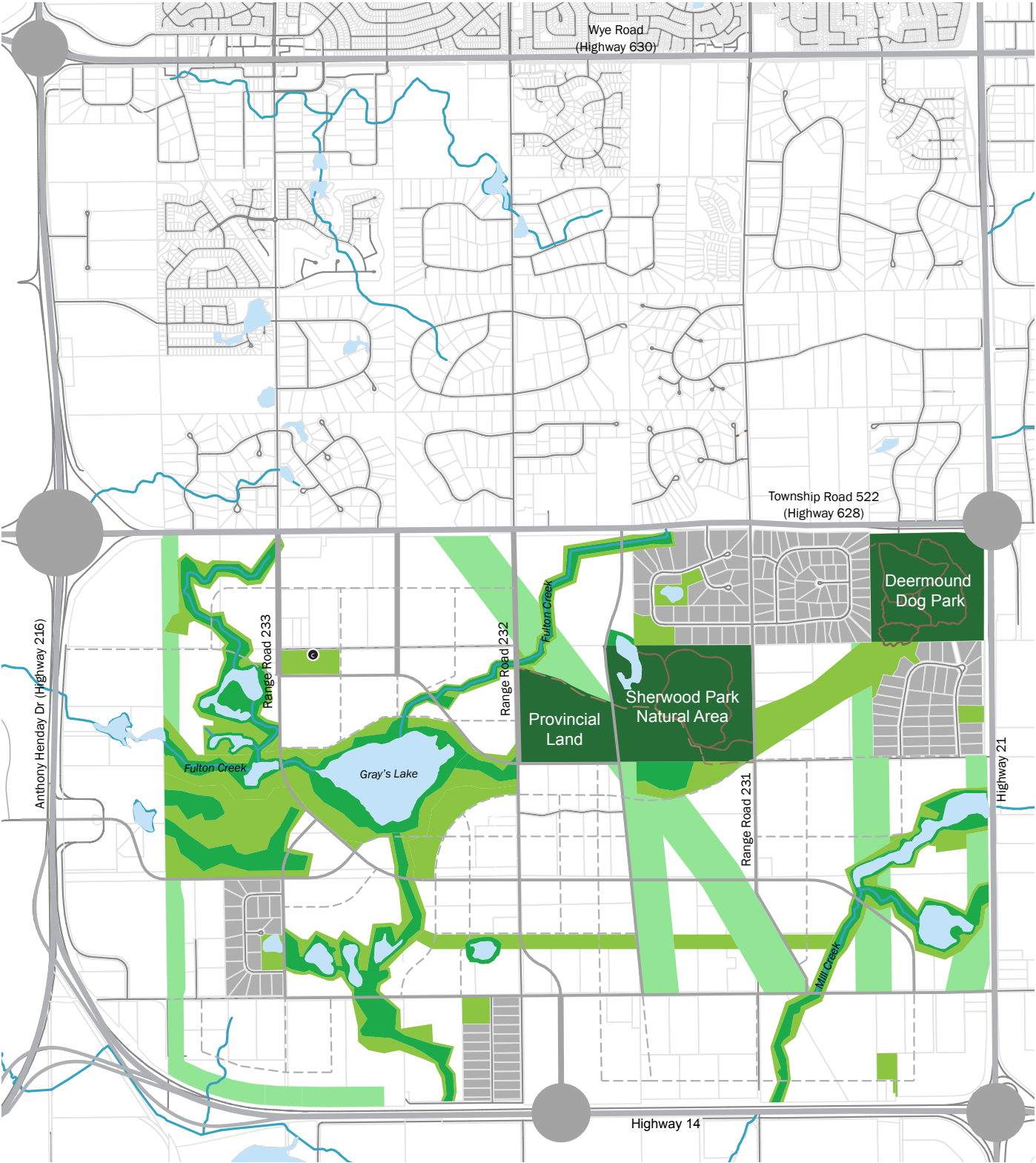
6.2.2 Environmental Framework and Open Space Concept

Existing major natural features and conservation areas will form the core of an interconnected open space system that protects and links areas for future designation as Environmental Reserve. The Sherwood Park Natural Area, Deermound Dog Off Leash Park, Fulton Creek, Mill Creek and the significant wetlands will provide the backdrop for other parks and linear open space, providing additional linkages. Pipeline corridors will be incorporated into the overall open space network. Lined for the most part by public streets, the greenspace system will be highly visible and accessible, enhancing the image of neighbourhoods and the quality of life for all residents.

A central park adjacent to both Gray's Lake and the future Town Centre will become a major gathering place for the community and signature open space. Locating schools adjacent to the major open space system, where possible, will enhance educational and recreational opportunities for students.

The boundaries of the greenspace network are conceptual and will need to be refined based on detailed biophysical assessments and parks and open space master plans. The width of linear open spaces, for example, may need to be reduced to optimize Municipal Reserve dedication for parkland and other community facilities. Nevertheless, the goal of an interconnected open space network should be maintained.

Figure 6.5
Environmental Framework and Open Space Concept



- Legend**
- Existing Protected Areas
 - Municipal Reserve
 - Environmental Reserve
 - Pipeline Corridors (With setbacks for sensitive uses)
 - Cemetery

6.2.3 Transportation Concept

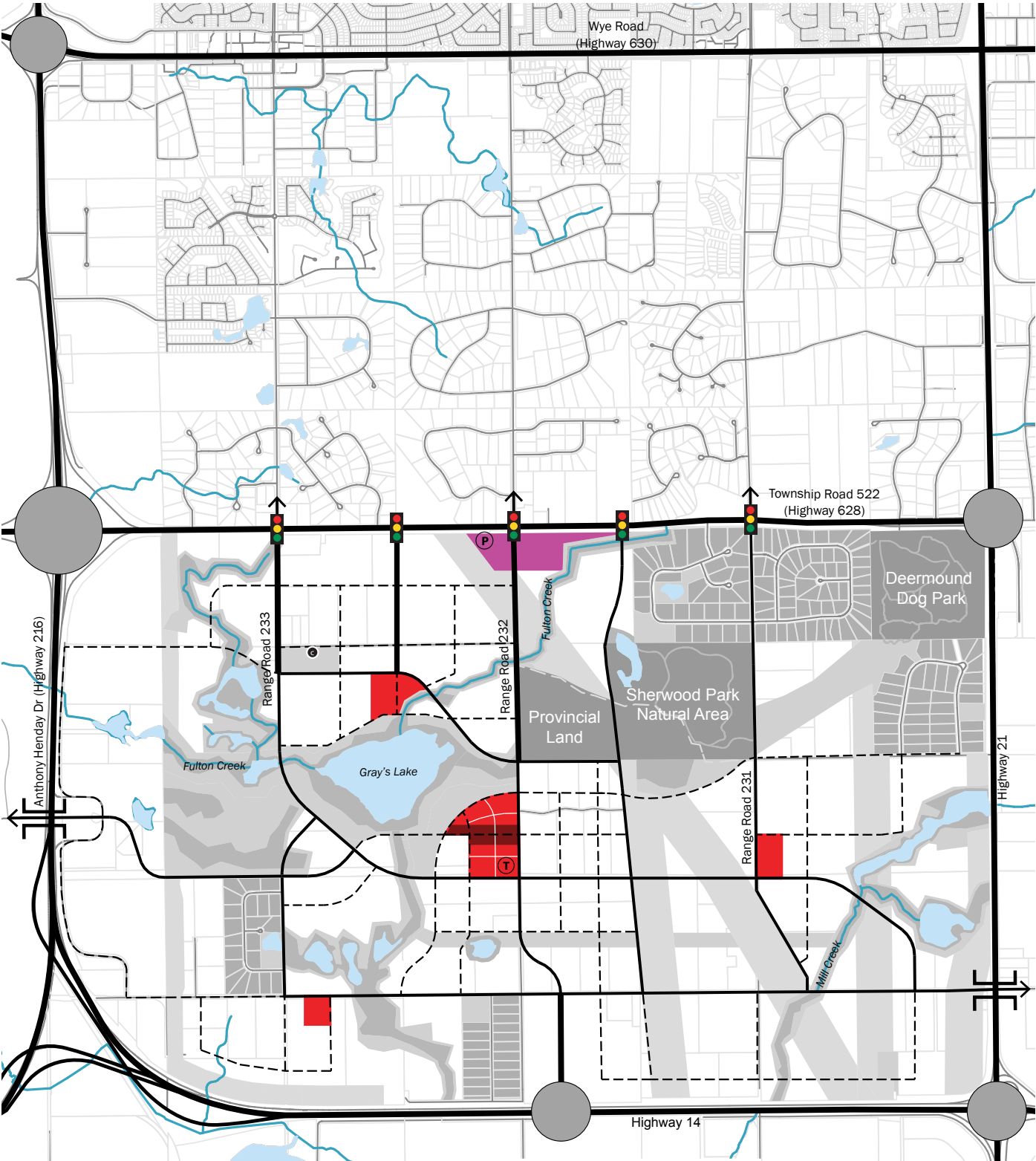
Access to and from Colchester will be via five signalized at-grade intersections on Highway 628 at Range Roads 233, 232 and 231, as well as mid block between Range Roads 233 and 232 and between Range Roads 232 and 231. Access configurations proposed for Highway 628 will need to be explored further with Alberta Transportation. There is the possibility that the County made need to take over control of Highway 628 from Alberta Transportation given that the existing functional plans did not contemplate urban development in Colchester. Additional direct access will be provided to Highway 14 by way of an interchange at Range Road 232. An existing flyover across Highway 216 at 34 Avenue will provide a limited westerly connection to Edmonton's arterial roadway network. The existing at-grade intersections on Highway 21 at Township Road 520 intersection will be replaced by a flyover and provide limited access to the area east of Highway 21.

The internal roadway network within Colchester is designed to offer a high level of connectivity through a fine-grained street grid that prioritizes the safety and convenience of vulnerable users over vehicular traffic. The fine grained grid is intended to keep the street network at a human scale with short block lengths for ease of way-finding and readability by pedestrians and cyclists. The completeness and continuity of the grid is somewhat muted near the west, south and east edges of Colchester due to the external access constraints referenced above.

All elements of the street network should have a distinctly urban configuration. While combinations of straight and curvilinear streets may be used to form the street grid, the use of conventional suburban style elements such as loops, crescents and cul-de-sacs should not be considered as these elements will diminish the functionality and connectivity of the street network. In order to encourage and enable a diversity of travel choices, the road network should be designed according to the principles of complete streets which are aimed at facilitating comfort, safety and convenience for all travel modes; specific features to facilitate pedestrian, cyclist and transit travel should be included.

Strathcona County will provide an appropriate range of transit services to the area; the exact nature and extent of service will depend on the type and magnitude of development. In time, a transit station will be located within the Town Centre to serve as a collection and distribution point for transit service within Colchester. In addition, a Park-and-Ride lot will be located on the west side of Range Road 232 immediately adjacent to Highway 628 to serve as a transfer point to commuter transit services to Edmonton. To support the efficiency and reliability of transit service, there may be a need to consider bus lanes or transit priority measures on the range roads (233, 232, 231) connecting Colchester to Highway 628 and Sherwood Park further north. Figure 6.6 illustrates the transportation concept within Colchester.

Figure 6.6
Transportation Concept



0 0.5km

Legend

Mixed-Use Centres

Town Centre Commercial Core

Major Retail Area

Arterial Roads

Collector Roads

Interchange

Highway Flyover

Cemetery

Transit Station

Park & Ride

Traffic Signal

6.2.4 Servicing Concept

Water

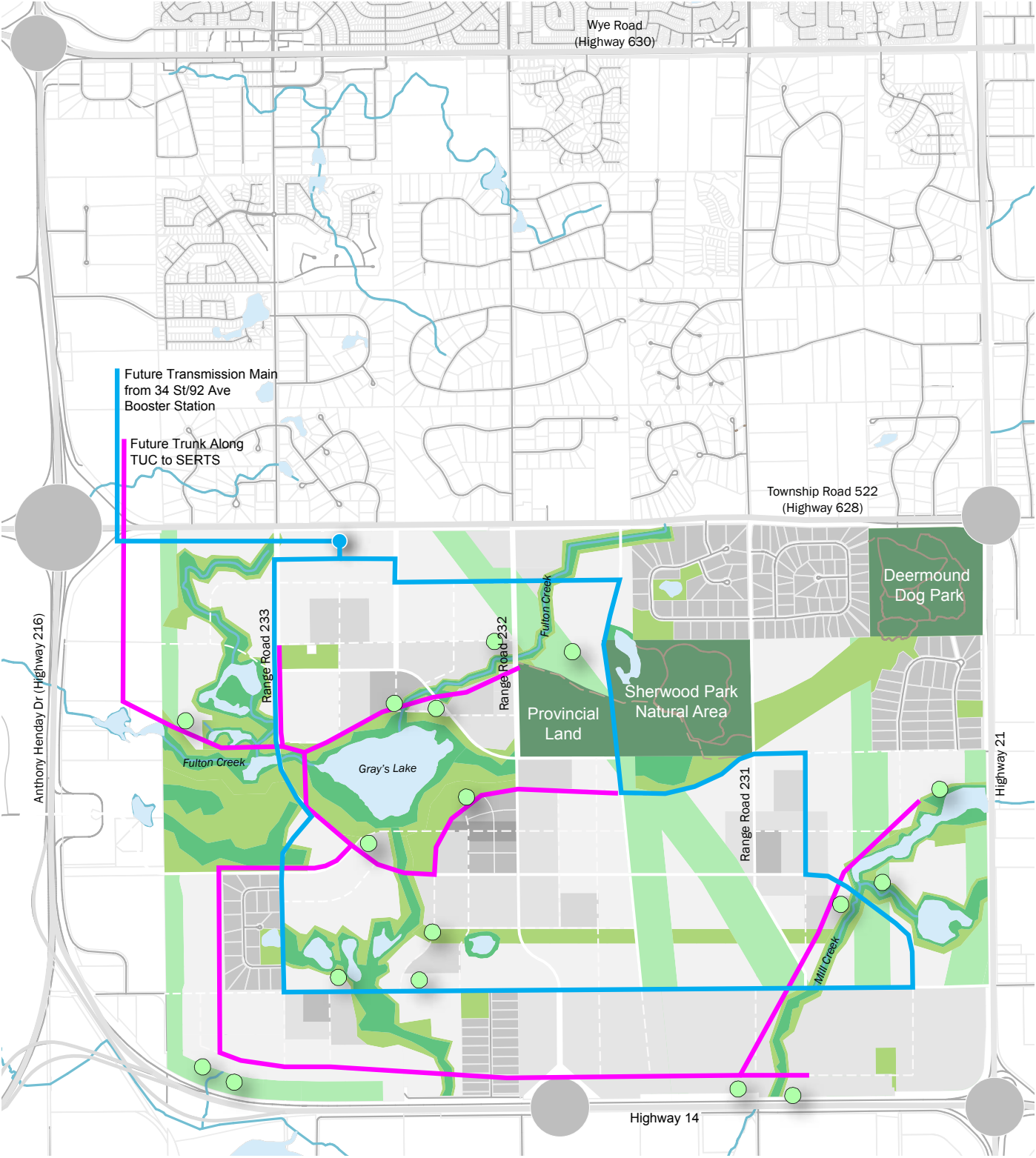
Water servicing of the Colchester area will consist of a new transmission line to be constructed from the 34 Street / 92 Avenue booster station. This line would be constructed along 92 Avenue to the Transportation Utility Corridor (TUC, Anthony Henday Drive). There, the transmission line would follow the municipal services corridor within the TUC south to Highway 628 (with approval of Alberta Transportation), and then parallel the Highway 628 ROW going east to a potential reservoir located in the northwest part of the Colchester area. Further investigation is required to determine the remaining space between existing utilities in the TUC. Unfortunately, it is not feasible to service Colchester from the existing Sherwood Park distribution system, as distribution water mains in the country residential district north of Colchester were not sized to accommodate additional development.

An onsite reservoir will be required to provide potable water storage for the Colchester area, and a logical location is the high point (elevation 742 m) located about 1.3 km east of the western site boundary along Highway 628. Given that the topographical relief of the area is only about 28 m, a single pumped pressure zone is anticipated to be adequate to service the entire study area, although this is dependent upon the design of the distribution network.

Wastewater

Offsite wastewater servicing for the Colchester area will be provided by the Southeast Regional Trunk Sewer (SERTS), the upstream end of which is currently located 9.5 km north of Colchester at the junction of Anthony Henday Drive and Highway 16. One offsite wastewater trunk constructed within the municipal services corridor in the TUC would be required to connect the Colchester system to SERTS, which would be used to convey the flow north to the Alberta Capital Region Wastewater Treatment Plant on Township Road 540. The upstream end of the offsite wastewater trunk may require trenchless construction as deeper than average depths would be required to provide gravity servicing to Colchester. It would be possible to reduce the length of very deep trunk by constructing a pump station, however the most sustainable option to reduce long-term operating costs would be a gravity system.

Figure 6.7
Servicing Concept



0 0.5km

- Legend**
- Potential Reservoir Site
 - Potential Stormwater Management Pond Location
 - Potential Water Servicing
 - Potential Wastewater Trunks

Onsite wastewater servicing will be provided by a series of gravity wastewater sewers and trunks generally following the topography to the offsite trunk connection point. Due to topographical constraints created by Fulton Creek and Mill Creek, and their wetlands, significant engineered fill will be required to facilitate development if a gravity sewer system is desired. Wastewater lift stations could be used to minimize the extent of fill, however significant fill would still be required for stormwater servicing. One or more lift stations could be considered, however it is preferable to provide servicing by gravity to minimize future operating costs, an important component of sustainability. A detailed engineering study is recommended to evaluate and compare the capital and life cycle costs of a gravity system compared to a pumped system, including the impact of grading (fill) requirements and with consideration for storm servicing.

Stormwater

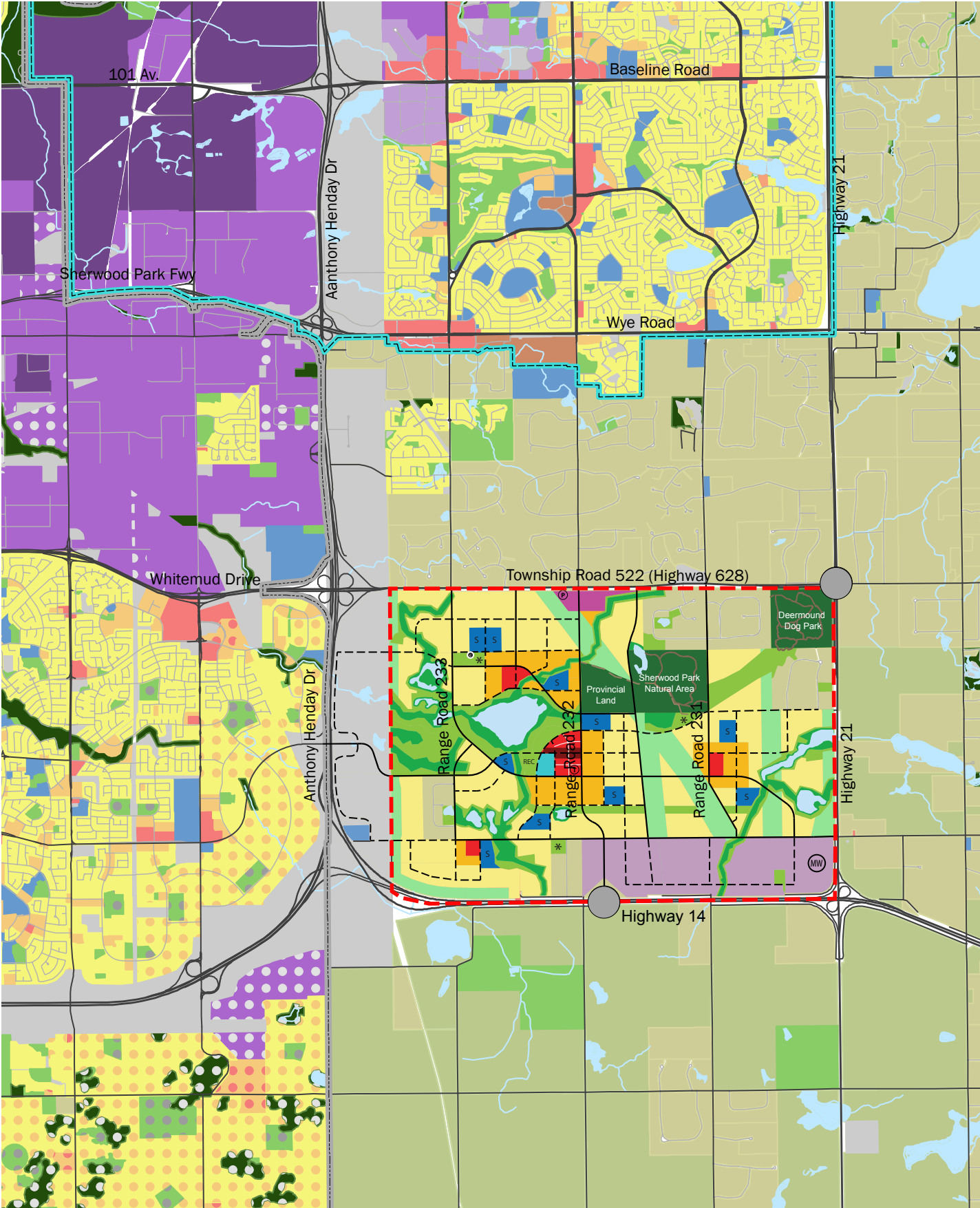
The Colchester area is drained by Fulton and Mill Creeks, with the watershed boundary between the creeks running through the development area. Along the creeks and tributaries there are several existing natural areas (wetlands, tree stands, wildlife habitats) which may be retained as Environmental Reserve or Municipal Reserve upon development. At several locations there is opportunity to create enhanced park and recreation areas with the conservation of environmental features such as tree stands and natural wetlands, combined with engineered wetlands or wet ponds for stormwater management.

Onsite stormwater servicing will be provided through a number of storm sewer systems discharging to the stormwater management facilities. The facilities will discharge to either Fulton or Mill Creeks, or one of their tributaries or wetlands. However due to the relatively flat ground surrounding the wetlands and the flat slopes of the shallow creeks, significant engineered fill may be required to allow for adequate relief from developed ground elevation to the SWMF outlet elevation. Approximately 3 to 5 m elevation difference between the developed ground (road/buildings) and the SWMF outlet (ditches or pipe invert) is required.

Fulton and Mill Creeks are sensitive water courses under pressure from urbanization in the City of Edmonton and Strathcona County. While peak runoff flow rates to these creeks are routinely controlled through the use of SWMFs, it is recommended that consideration also be given to some degree of runoff volume control where practical. The extended duration of elevated discharge from SWMFs to creeks has been shown to contribute to stream erosion, thus reducing both the peak flow rate and the total runoff volume discharged from Colchester would help mitigate potential impacts on these urban creeks. Low Impact Development (LID) measures such as rain gardens, bioswales, naturalized drainage courses, and minimization of impervious surface areas, are particularly effective at reducing stormwater runoff volumes through infiltration, evaporation and evapotranspiration.


























The headwaters of Fulton Creek is located within Colchester, and significant natural hydrologic storage exists in the form of multiple wetlands and low floodplains. The impact of developing in this area has the potential to significantly disturb the natural hydrology of Fulton Creek by increasing peak flows and volumes. The County has identified significant ER and MR to protect in this sensitive area, which will help lessen impacts on Fulton Creek. However, a detailed drainage study is required to determine the impact of development on Fulton Creek, and the potential benefits of various BMPs and LID measures to mitigate increased runoff.

Figure 6.8
The Recommended Community Design Concept in Context


























The context map shows how the structure of a new community in Colchester would be different from the urban structure of Sherwood Park and how the two communities would be connected to one another.

Context Legend

	Watercourse		Existing Protected Area
	Water Body		Parks, Open Space & Recreation
	Agriculture		Utilities
	Residential (Country/Rural)		Residential (Planned)
	Residential (Estate/Low Density)		Mixed Residential/Commercial (Planned)
	Residential (Medium/Density)		Industrial Non-Heavy (Planned)
	Residential (High Density)		Environmental Reserve (Planned)
	Mixed Use Urban Village		Parks, Open Space & Recreation (Planned)
	Commercial (General/Retail)		Colchester Study Area
	Commercial (Low Intensity/Business)		Sherwood Park
	Industrial Light/Medium		County Boundary
	Industrial (Heavy)		
	Institutional		
	Environmental Reserve		

Colchester Legend

	Existing Residential		Pipeline Corridors (With setbacks for sensitive uses)
	Low Density Residential		Lakes
	Medium Density Residential		Arterial Roads
	Mixed-Use Centres		Collector Roads
	Town Centre Commercial Core		Interchange
	Business Park Area		Cemetery
	Major Retail Area		Transit Station
	Schools		Park & Ride
	Institutional		Potential Meltwater Facility
	Community Centre		
	Major Recreation Centre		
	Existing Protected Areas		
	Municipal Reserve		
	Environmental Reserve		

7 Policy Directions

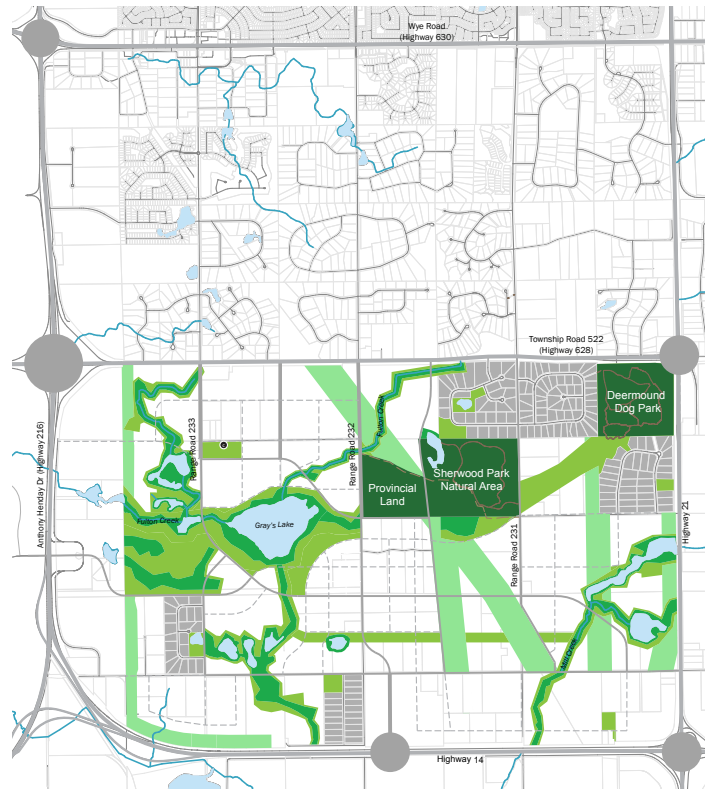
As described in Chapter 6, the community design concept should inform the components necessary to support the vision for development in Colchester. General and specific policies concerning all facets of the community will be required to ensure the vision is achieved and the principles are met. This section provides direction for such policies, which should be embedded in an Area Concept Plan and Area Structure Plans for Colchester, should Council decide to proceed with growth in the area. The policy directions state what the County, developers and others *should* do as they design and build Colchester, as they are recommendations at this stage. Translating the directions into policy, in most cases, will be a simple matter of replacing “should” with “shall.”

7.1 The Natural Environment

The policy directions below support Principle 2, Integrate and Conserve the Natural Environment. They focus on methods to respect Colchester’s unique moraine landscape and numerous wetlands as well as responding to the opportunities and challenges they present for development. They also support the concept of a robust and integrated environmental network that is a defining feature of the community.

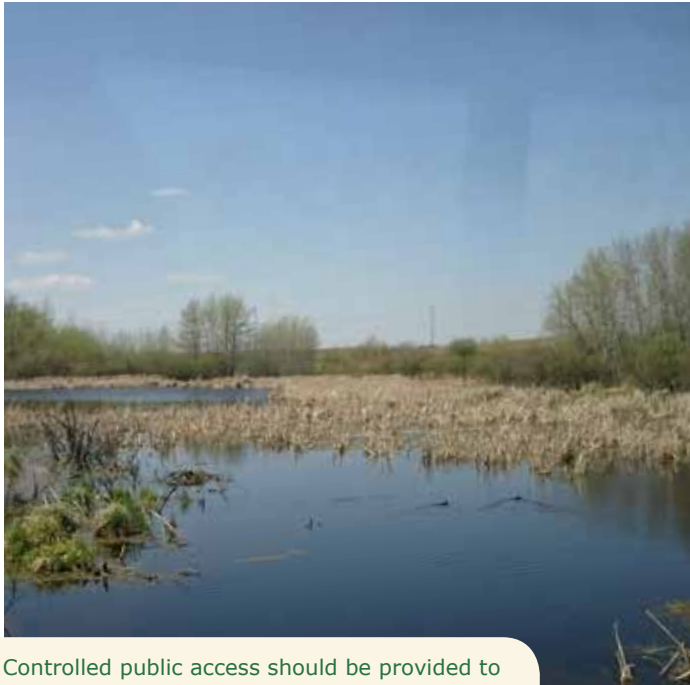
7.1.1 Conservation of Significant Natural Features

The community design concept for Colchester identifies the general location of land to be dedicated as Environmental Reserve (ER). The precise boundaries of the ER will be delineated through future detailed studies undertaken as part of an Area Concept Plan (ACP) or Area Structure Plans (ASPs). It is anticipated that additional ER lands will also be identified at the ACP or ASP stage due to the number of wetlands in Colchester. Other tools may also be used to conserve significant features to enhance the environmental health of the area. The intent of the ER and open space system is to provide a framework for development and contribute to a high quality of life for residents.



7.1.2 Defining Environmental Reserve

Rivers, lakes, creeks, wetlands, other bodies of water and unstable lands should be taken as Environmental Reserve (ER) and encompassed by a buffer that is also dedicated as ER. The width of the ER buffer should be measured from the top of bank and should be a minimum of 10



Controlled public access should be provided to allow residents to enjoy natural features.

metres. The top of bank should be considered to be the top of the waterbody's valley or ravine. Where banks are not well defined (e.g. in the case of lakes and wetlands) the top of bank would be equivalent to the 1:100 year floodplain.

The width of the ER buffer from the top of bank should be determined through a combined analysis of:

- A Top of Bank Survey completed by an Alberta Land Surveyor
- A Slope Stability Study to determine potential for erosion and unstable slopes
- A Floodplain Analysis to determine the 1:100 year floodplain
- A Biophysical Assessment to determine the area needed for pollution control and ensuring the integrity of the feature

Additional ER buffer should be required in situations where it is needed to ensure appropriate access to bed, bank and shore for landscape management activities and for recreational trails outside of unstable slopes or areas susceptible to erosion.

7.1.3 Wetlands

Development in Colchester should achieve "No Net Loss" of wetland functions through a strict series of mitigation activities – avoidance, minimization or compensation – in accordance with Strathcona County's Wetland Conservation Policy.

The goal of Alberta's Wetland Policy, released in September of 2013, is to conserve, restore, protect and manage Alberta's wetlands to sustain the benefits they provide to the environment, society and economy. Development is expected to avoid damage or destruction of wetlands, or minimize the impacts and provide applicable compensation, or replace for the damage of destruction. Compensation options may include restoration of previously drained wetlands, restoration of degraded wetlands, or the use of a wetland mitigation bank.

7.1.4 Environmental and Open Space Network

The Sherwood Park Natural Area, including the Old Edmonton Trail network, should be integrated into the overall environmental and open space network of Colchester. A link to Deermound Dog Off Leash Park should also be established. In addition, the provincially-owned lands to the west of the Sherwood Park Natural Area should be used to establish a further linkage between the Natural Area and Gray's Lake. The provincially-owned lands would be appropriate for community uses such as parks, schools or other public facilities, provided such uses do not conflict with an environmental link for wildlife habitats and movement.

7.1.5 Creek Crossings

Bridge types over Fulton Creek, Mill Creek and their tributaries, as identified in the community design concept, should be based on ecological connectivity needs. Either clear span bridges or culvert style crossings with wildlife considerations may be appropriate to minimize impacts to aquatic or terrestrial habitats and the natural environment. Bridges will be important to establishing a grid of streets within the new community and preventing barriers between neighbourhoods.

7.1.6 Uses Adjacent to Environmental Reserve

Parks, stormwater management facilities and public streets are appropriate uses adjacent to ER, provided they are designed to have minimal adverse impact on environmental features. Private development that backs onto ER should be limited to ensure environmental features provide a broad public benefit to the community and its residents. Where private development is permitted to back onto ER, safe public access along the feature via a public pathway should be provided as MR. Public access to the public pathway between buildings should also be provided at regular intervals.

7.1.7 Access to Environmental Reserve

Generally, trails, boardwalks and lookout points should be used to provide controlled public access to ER while protecting the environmental function of the feature. Area Structure Plans should conceptually identify trail alignments through MR, with access points to ER where appropriate.

7.1.8 Upland Features

Development should incorporate woodlots and other significant natural features that do not qualify as ER into the major open space system. Such features should also be incorporated into the design of parks and other public open spaces wherever possible, as part of the Municipal Reserve dedication. Opportunities to create continuous landscape features through conservation should be incorporated.

7.1.9 Conservation and Management Plans

The County should consider preparing conservation and management plans for Fulton Creek and Mill Creek to address such matters as:

- Permitted and prohibited recreational uses in significant natural areas
- Areas for habitat restoration or enhancement and the means by which this will be achieved
- Guidelines for new open spaces linking natural areas
- Areas for erosion control
- Detailed guidelines for uses adjacent to or integrated with significant natural areas, including parks, stormwater management facilities, streets and private open space

7.1.10 Stormwater Management

The County should apply its Best Management Practices (BMPs) for stormwater management in Colchester to ensure any adverse impacts on creeks, tributaries and other natural features are minimized. The County will occasionally update the BMPs to reflect current best practice.

7.1.11 Deermound Dog Off Leash Park

Deermound Dog Off Leash Park is planned to remain as a regional open space amenity. If consideration were given to developing community facilities on the site in future, further remediation of the park would be required.

7.2 Rural Heritage

The policies below support Principle 1, Acknowledge and Support Colchester's Rural Heritage. They are intended to ensure that the new community respects Colchester's history as an early settlement area in Strathcona County as well as existing land uses that will remain as development takes place. As an area with a range of active rural, commercial, and agricultural uses, development in Colchester should maintain the viability of such uses and have regard for the County's Agriculture Master Plan.

7.2.1 Rural Heritage

Future development should respect the heritage of the Colchester area as the new community develops. Colchester Cemetery and the Old Edmonton Trail, specifically, should be maintained and enhanced with interpretive signage to educate residents and visitors about local history. Historical and cultural information should also be provided about the Beaver Hills.

7.2.2 Transitions

New development should provide an appropriate transition to rural areas outside Colchester and existing country residential subdivisions both within and adjacent to Colchester. Appropriate transitional land uses include low density residential and open space.

7.2.3 Contiguous Development

To avoid conflicts between active rural uses and urban development, the urban community should develop in a contiguous manner and avoid creating fragments of rural land.



Colchester should feature community gardens for local food production.

7.2.4 Buffers

To prevent land use conflicts, developers should provide appropriate open space buffers between urban development and active farmland where no natural buffer exists. The buffer should be designed to be easily integrated with urban development if and when development takes place on the farmland.

7.2.5 Urban Agriculture

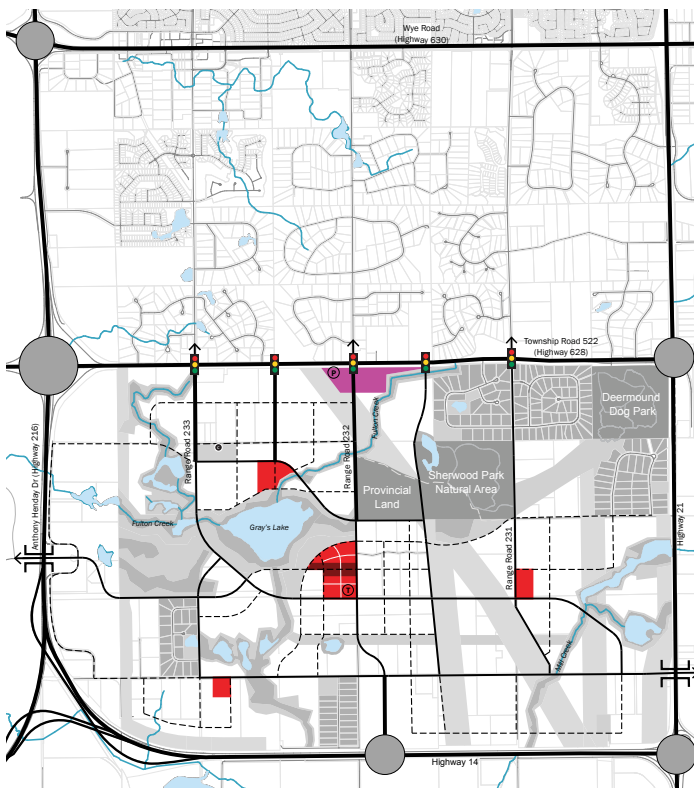
To promote urban agriculture in Colchester, future Area Structure Plans should identify opportunities, policies and guidelines related to rooftop gardens, community gardens, vertical farms and other forms of urban agriculture.

7.2.6 Farmers' Markets

Plans for Village Centres and the Town Centre within Colchester should identify potential locations for farmers' markets.

7.3 Transportation and Streets

The policies below support Principle 6, Provide Transportation Choice. The overall intent is to ensure the new community is designed so that people can get around easily by car, foot, bicycle or transit. By establishing a road network and hierarchy that provide convenient multi-modal access to all destinations within the community, residents generally should enjoy equal access to employment, education and retail opportunities, regardless of age, abilities or income. A fine-grained grid network of streets should be developed and the concept of complete streets and guidelines such as the NACTO Urban Street Design Guide (<http://nacto.org/usdg/>) should guide the design of individual streets.



7.3.1 Interconnected Street Network

The transportation network should provide a high level of connectivity through a fine-grained street grid that prioritizes the safety and convenience of vulnerable users over vehicular traffic. All elements of the street network should have a distinctly urban configuration. While combinations of straight and curvilinear streets may be used to form the street grid, the use of conventional suburban style elements such as loops, crescents and cul-de-sacs should not be considered as these elements will diminish the functionality and connectivity of the street network.

Where possible, the future street network should connect to existing residential streets in Colchester. In addition, it is expected a new street will be required to access Deermound Dog Off Leash Park from Range Road 231.

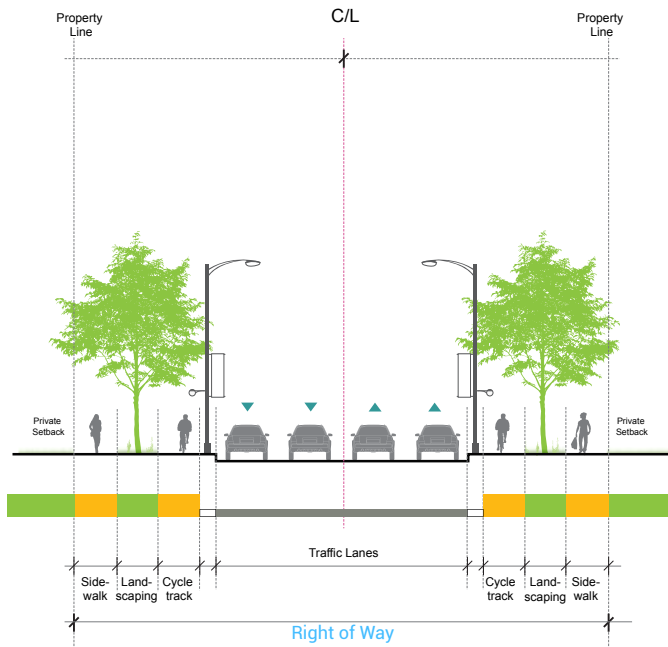
7.3.2 Updated Engineering Standards

To support and enable a multi-modal circulation system, the County should revise its current subdivision design standards to reflect best practices and a “complete streets” design philosophy that favours slower vehicular circulation and prioritizes the quality, safety and convenience of pedestrian, cyclist and transit movement.

7.3.3 Roundabouts

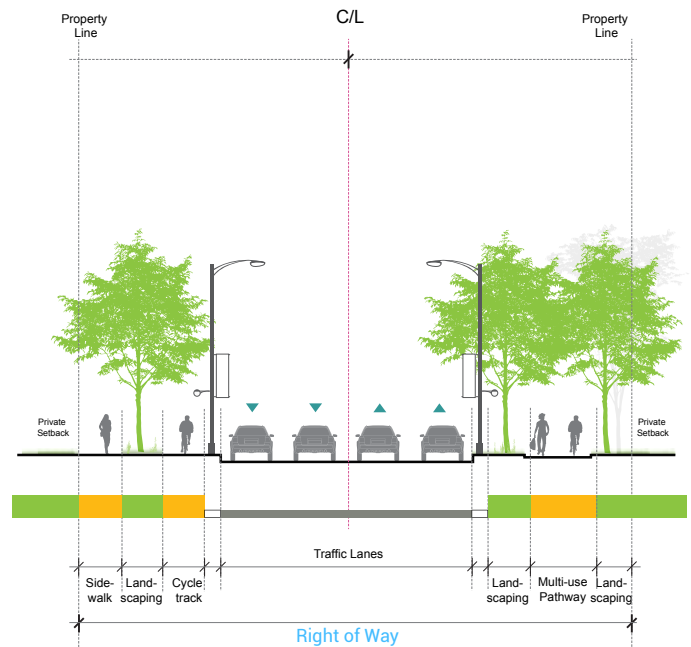
Where minimal pedestrian movement is planned, roundabouts at intersections can help to manage traffic efficiently and safely. Where walking is strongly encouraged, roundabouts may not be appropriate, specifically in and surrounding Mixed-use Centres, schools, community centres, and at transit stops. Intersection types that prioritize safety and convenience for pedestrians and cyclists should be utilized in these areas.

Typical Arterial in Colchester



Arterial roads should have sidewalks and cycle tracks and/or multi-use pathways. Consideration should be given to the need for snow storage.

Arterial with Multi-Use Pathway



Cycle tracks should be separated from traffic.

7.3.4 Access to Arterials

Along the approaches to highway interchanges, access from local roads to arterials, and vice versa, should be limited. Generally, however, local roads should be allowed to intersect with arterials, with appropriate traffic controls, to maximize connectivity for all travel modes and evenly distribute vehicular traffic.

7.3.5 Target Speed Approach

Rather than using the conventional design speed approach, the County should adopt a "target speed" approach for all roads that considers the needs of all modes. For example, a target speed of 50-60 km/h should be considered for arterial roads.

7.3.6 Pedestrian and Cyclist Infrastructure

All roads should have provision for pedestrians and cyclists on both sides. Generally, collector and minor arterial roads should have sidewalks and separated bike lanes or cycle tracks. Major arterial roads should have either a sidewalk and separated cycle track or a multi-use pathway on either side. Links to County-wide connections should be created wherever possible.

7.3.7 Improvements to Existing Roads

The range roads linking Colchester to Sherwood Park and rural roads adjacent to existing subdivisions in Colchester should be monitored and improved as necessary to address traffic volumes and safety as Colchester develops. TIAs/traffic studies



On-street parking should be featured throughout the new community, particularly in mixed-use centres

should be prepared to guide improvements and should address the needs of pedestrians, cyclists, motorists and transit vehicles. Future improvements to the Range Roads north of Colchester should include dedicated facilities for cyclists.

7.3.8 Transit Centres

A transit centre with park-and-ride facilities should be planned on the south side of Highway 628, close to Range Road 232. Transit centres oriented to pedestrians and cyclists should be planned in Village Centres and the Town Centre. The design of transit centres should allow for future express bus service to destinations in Sherwood Park and Edmonton. All transit centres should include secure, weather-protected bicycle storage facilities.

7.3.9 Transit Priority Measures

Transit priority measures such as pass-through lanes should be considered at interchanges near park-and-ride facilities. All intersections of arterial roads and arterial/collector roads should be designed to accommodate transit priority measures such as queue-jumps.

7.3.10 Comprehensive Trail Network

An interconnected trail network utilizing open spaces and road right-of-ways should complement and link to the road network. Links to County-wide connections should be created wherever possible.

7.3.11 Updated Parking Standards

To prevent an oversupply of parking and encourage walking, cycling and transit use, the County should develop updated parking standards for Village Centres and the Town Centre. Updated parking supply requirements should be prescribed in areas well-served by transit and should establish parking maximums and allow parking to be shared among commercial, institutional and high-density residential uses.

7.3.12 On-street Parking

To support commercial and residential uses, particularly in Mixed-use Centres, and to optimize the use of streets in off-peak periods, on-street parking should be considered throughout the new community.

7.3.13 Public Realm and Leafy Streets

Integrating a diversity of tree species into the design of every street is vital to the creation of a more pedestrian-oriented transportation system. Rows of trees should be a fundamental part of the design of all roads. Boulevards should be wide enough to accommodate snow storage and allow trees to fully grow between the roadway and the pedestrian zone. Underground utilities should also be planned to allow tree growth. Roads with centre medians 3.5 metres or greater in width should include a suitable line of centre-median trees to reinforce the desired urban aesthetic and more restrained vehicular operating speeds.

7.4 Utility Infrastructure, Stormwater Management and Energy

Municipal services and energy are typically the hidden elements of a community but are fundamental to ensuring it functions sustainably. The policy directions below emphasize opportunities to integrate natural resources and systems into the design of the community and minimize impacts on the environment.

7.4.1 Municipal Services

All urban development will be serviced with municipal water, wastewater and stormwater utilities. The location and capacity of the major water transmission and wastewater/stormwater trunks will be determined through a detailed servicing study prepared for an Area Concept Plan.

7.4.2 Stormwater Management

Generally, storm drainage should be managed with a system of natural and constructed wetlands, wet ponds, and low impact development (LID) or green infrastructure such as bio-swales that maximize infiltration and use biological processes to treat run-off. In Village Centres and the Town Centre, the County should consider permitting alternative LID measures such as urban swales and structural soil cells/suspended pavement systems, to help reduce overall rainfall runoff volumes.

7.4.3 Low Impact Development (LID)

Innovative approaches to LID features, such as rain gardens, bioswales, naturalized drainage courses and permeable paving, should be encouraged in all land use designations. Detailed stormwater studies will be required to determine what impact, if any, LID features will have on the need for conventional stormwater infrastructure and management facilities.

7.4.4 Existing Wetlands

Existing wetlands and drainage courses should be integrated with future stormwater management schemes where topographically possible. Utilizing wetlands as stormwater facilities or placing facilities adjacent to them will provide an ecological benefit.

7.4.5 Enhancing Environmental Reserve

The County should consider permitting new constructed wetlands and wet ponds adjacent to Environmental Reserve where they will enhance wildlife habitat opportunities.

7.4.6 Stormwater Reuse

At the Area Structure Plan stage, opportunities for stormwater reuse should be explored such as reuse of stormwater to irrigate parks, gardens and landscaping in accordance with applicable legislation.

7.4.7 Renewable Energy

Use of renewable energy sources and high-efficiency systems should be considered for all development in Colchester. Geothermal and district heating systems should be considered where the scale and density of development and mix of uses would support an efficient system, for example, in the Mixed-use Centres. Rooftop solar panels should be considered for all forms of development across the community. The County should develop incentives to encourage the integration of renewable energy in Colchester.

7.4.8 Pipeline Setback Guidelines

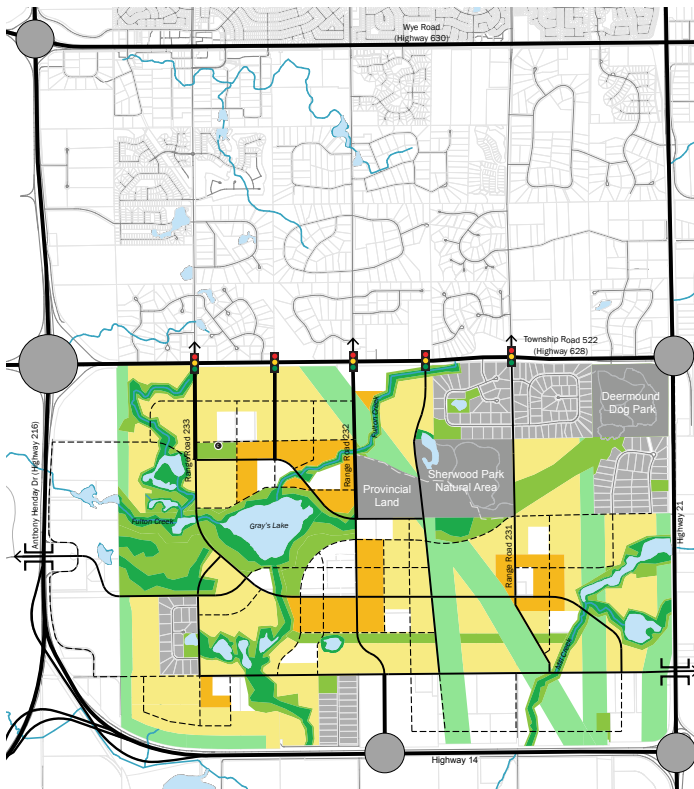
At a minimum, development in Colchester should follow the principles of MIACC, particularly in regards to setbacks for sensitive uses from pipeline right-of-ways.

7.5 Residential Areas

The policy directions below would apply primarily in both the Low-density and Medium-density Neighbourhoods, as identified in the community design concept, but also include more general housing policies. Besides supporting Principle 4, Provide Diverse Housing and Neighbourhoods, they also support Principle 5, Establish Mixed-Use Centres.

7.5.1 Minimum Density Target

The minimum overall residential density target for planning areas subject to Area Structure Plans (ASPs), including Mixed-use Centres, should be no less than 33 units per net residential hectare.



7.5.2 Diverse Planning Areas

Planning areas subject to ASPs and comprised of multiple neighbourhoods should accommodate a full range of housing types and sizes. The following maximum and minimum targets for Low-density and Medium-density Neighbourhoods combined should guide ASPs and Plans of Subdivision:

- Maximum 60% single-detached and semi-detached houses
- Minimum 25% townhomes
- Minimum 10% apartments

Based on these percentages, if an area meets the maximum of 60% for single-detached and semi-detached houses, 5% of its housing make up will be flexible between townhomes and apartments after it meets the minimum requirements for those two types of housing.

7.5.3 Diverse Neighbourhoods

While addressing the above overall housing target, ASPs should divide residential areas into neighbourhoods, each with a distinct housing mix that includes single detached homes, semi-detached homes, townhomes and apartments. Minimum targets for each housing type should be established for each neighbourhood, with combined targets supporting the overall targets above.

7.5.4 Medium-density Neighbourhoods

There should be a greater concentration of townhomes and low-rise apartment buildings up to four storeys in Medium-density Neighbourhoods, but low-density forms of housing should also be considered. Mid-rise apartment buildings up to six storeys should also be allowed on arterial roads. The higher density forms of housing will support vitality in the Town Centre and Village Centres as well as public transit.



Top: Low-rise apartment buildings should be common in Medium-density Neighbourhoods.
Above: Laneways should be considered throughout the community and should be required where townhousing is proposed.

7.5.5 Low-density Neighbourhoods

Single-detached and semi-detached homes should be the dominant forms of housing in Low-density Neighbourhoods, but townhomes should also be common, and low-rise apartment buildings up to four storeys should be considered on collector and arterial roads.

7.5.6 Laneways

Public or private rear laneways for access and parking should be considered throughout the community. Laneways should be required for development that fronts a major street where individual driveways are not appropriate. To prevent garages and driveways from dominating neighbourhood streetscapes, laneways should also be required in Medium-density Residential areas and in Low-density Residential areas where housing is on narrow lots (nine metres wide or less). All townhouse developments should incorporate laneways.

7.5.7 Rear Lotting

To support the objective of attractive, pedestrian-friendly streetscapes, development backing onto a road should not be considered except near highways, highway interchanges and flyovers.

7.5.8 Affordable Housing Strategy

Future Area Structure Plans (ASPs) in Colchester should identify targets, policies and strategies for different types of affordable housing in the new community, including market ownership, non-profit rental and for-profit rental. The ASPs should also identify potential locations for affordable housing in Colchester that are proximate to transit and other services. ASPs should describe how development will help address the County's housing needs as identified in the Capital Region Board's Strathcona/Fort Saskatchewan Sub-Region Housing Needs Assessment. The County should consider developing incentives for affordable housing initiatives led by the private sector.



Neighbourhoods should be architecturally diverse with a variety of house models on each block.

7.5.9 Secondary Suites

Basement suites should be considered throughout the new community. Detached garden suites should be considered and encouraged in low-density neighbourhoods where a parking space for the unit can be accommodated behind the main house, accessed from a rear laneway or a driveway at the side of the house. Area Structure Plans should identify a minimum target for purpose-built garden suites.

7.5.10 Existing Subdivisions

The existing country residential subdivisions in Colchester should be integrated with ASPs in a manner that maintains existing road access and allows for future servicing of the subdivisions. As the opportunity arises, infrastructure in the subdivisions should be improved to be consistent with residential areas throughout Colchester. Residential intensification of the existing subdivisions may be considered, provided it is connected to municipal services and the form is compatible with neighbouring development.

7.5.11 Architectural Diversity

Houses and apartment buildings should be built of enduring, attractive materials. Individual streets and neighbourhoods should display a variety of architectural styles. The streetscape of each block of a residential neighbourhood should be defined by several house models. Building materials, porch designs and roof treatments should vary; dormers and gabled roofs should be encouraged. Attached townhouses generally should be broken up into rows of no more than six units, and the architecture of each row should vary.

7.5.12 Eyes (and Ears) on the Street

Homes and the main living areas within them should have a strong relationship to the street. Garages should not dominate the front façade or extend from it. Front porches should be encouraged.

7.5.13 Neighbourhood Parks

The community open space system will provide a setting for neighbourhood parks with a range of amenities, but smaller parks should also be planned within residential areas to ensure all residents are within a five-minute walk of a park (approximately 400 metres).

7.5.14 Grid of Streets

Consistent with the objective to establish fine-grained grid networks of streets in residential areas, neighbourhood blocks generally should not exceed 300 metres in length.

7.5.15 Leafy Streets

At least one tree should be planted in the front yard of all new homes, close to the sidewalk, to support an inviting and comfortable pedestrian realm.

7.5.16 Solar Orientation

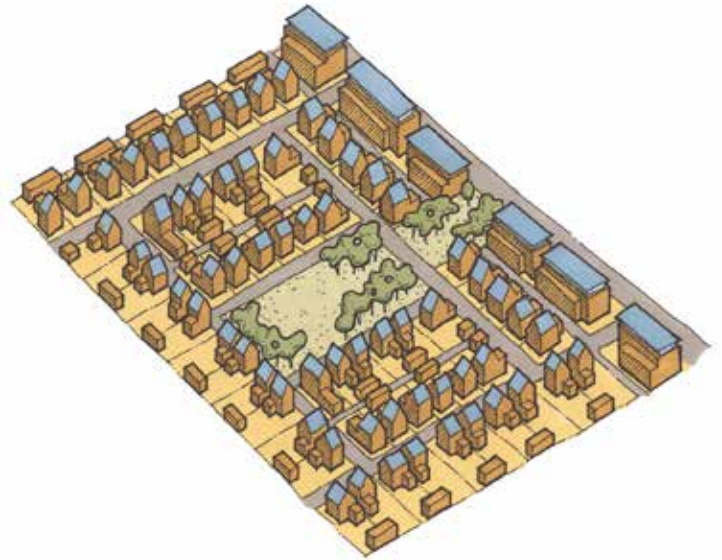
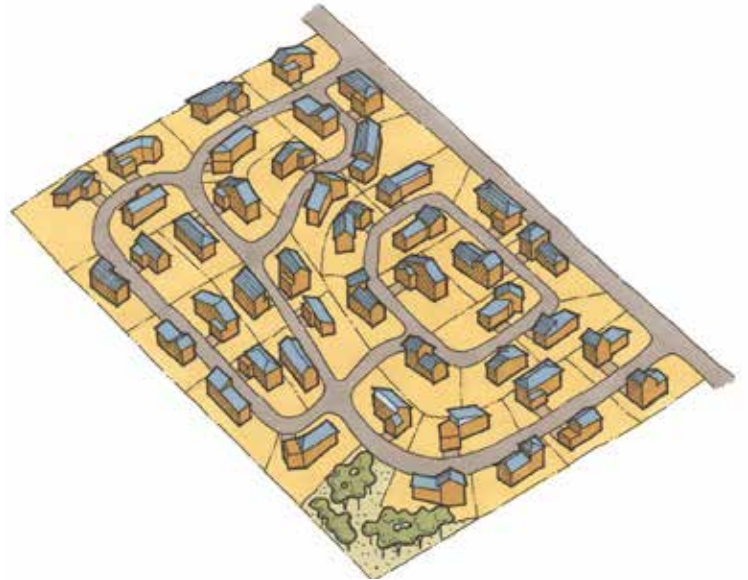
The design of neighbourhoods should seek to maximize opportunities for passive solar heating. Generally, blocks should be oriented within plus or minus 15 degrees of geographical east-west, wherever practical, with the east-west block lengths equal to or greater than the north-south block lengths.

7.5.17 Non-residential Uses

Community, institutional and small-scale commercial uses serving neighbourhoods should be considered in residential areas. Commercial uses, such as convenience stores, coffee shops and take-out restaurants, should be oriented to streets, with parking provided on the streets and in small on-site parking lots at the rear or side of the building. Large-scale institutional uses, such as schools and places of worship, should be located on peripheral sites fronting a collector or arterial road.

7.5.18 Design Guidelines

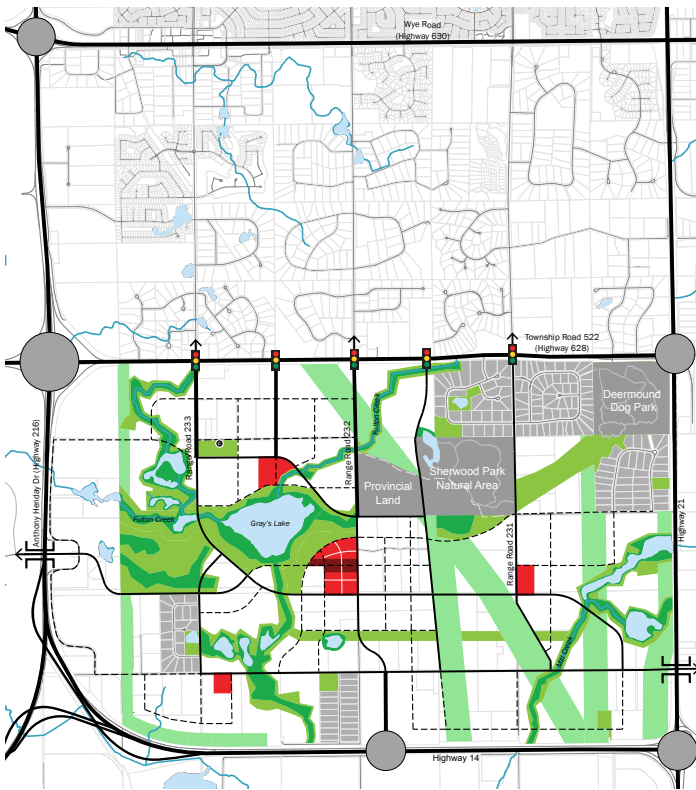
ASPs should include detailed neighbourhood design guidelines illustrating how the principles and above policies will be satisfied.



Residential areas should feature a fine-grained grid network of streets, rather than curvilinear streets.

7.6 Mixed-use Centres

Mixed-use Centres are intended to be hubs for the neighbourhoods that surround them and the larger community and, over time, they should become distinct neighbourhoods unto themselves. Mixed-use Village Centres and a larger Town Centre, located next to Gray's Lake, will be the primary locations for shopping, dining, entertainment, commercial services, cultural facilities and high-density housing, and should be planned as such.



7.6.1 Mixed Use Target

The mix of uses in Mixed-use Centres may take different forms. Generally, not more than 50% of the area of a centre, excluding public streets, should be used for stand-alone commercial uses, with the remainder used for high-density and medium density housing or mixed commercial-residential buildings, i.e., housing above ground-floor retail.

Village Centres

7.6.2 Mix of Uses

The Village Centres should contain commercial amenities for the neighbourhoods that surround them, in addition to apartment buildings up to four storeys and townhomes. Generally, each Village Centre should accommodate a grocery store and a range of smaller retail and service establishments, as well as restaurants. To ensure there is commercial vitality in the Village Centres, small and mid-size retail and restaurants should be restricted in the Major Retail Area at Highway 628 and Range Road 232 (see policy directions 7.8.1 and 7.8.2).

7.6.3 Community Uses

Community centres and places of worship should be located within or close to the Village Centres, directly connected by pedestrian and cycling infrastructure for convenient community access.

7.6.4 Street-oriented Buildings

Most of the retail uses in Village Centres should be oriented to a main street, with buildings framing the street and parking generally located at the rear of buildings to create an inviting pedestrian realm. Small parking lots at the side of buildings may also be considered.



Mixed commercial-residential buildings should be encouraged.

7.6.5 Minimum Density

The minimum density of residential developments in Village Centres, including mixed residential-commercial buildings, should be 60 units per net residential hectare.

Town Centre

7.6.6 Broader Mix of Uses

Besides serving surrounding neighbourhoods, the Town Centre, located next to Gray's Lake, should contain commercial, cultural and educational uses that serve the entire community, including high schools on peripheral sites. A variety of commercial uses should be considered, including office buildings and retail establishments of all types and sizes. A community centre and places of worship should be located within or close to the Town Centre, directly connected by pedestrian and cycling infrastructure for convenient community access and to complement other proximate uses.

7.6.7 Commercial Core

Most retail stores and services in the Town Centre should be oriented to continuous "main streets" forming a commercial core, as generally identified in the community design concept.

7.6.8 Taller Buildings

The Town Centre should also have the greatest concentration of high-density housing, including low-rise apartment buildings up to four storeys and mid-rise apartment buildings up to nine storeys. The minimum density of residential developments in the Town Centre, including mixed residential-commercial buildings, should be 90 units per net residential hectare.

7.6.9 Large-Format Retail

Large-format retail stores in the Town Centre, such as department and home improvement stores, should have an urban format. They should have their main entrance on a street, with the bulk of their floor area located behind smaller retail units or on a second level. Parking should be located at the rear of the building, preferably on multiple levels to minimize its footprint.



All buildings fronting the main street should have a minimum height of two storeys.

Urban Design in the Mixed-use Centres

7.6.10 Pedestrian-oriented Design

Development in the mixed-use centres should adhere to the following urban design principles to ensure the centres are walkable and transit-supportive:

- a) A network of streets and blocks should be developed, with blocks generally not exceeding 150 metres in length or width for maximum walkability.
- b) Buildings should face, and have their main entrance on, a public street and contribute to a traditional main street feel.
- c) Retail and mixed-use buildings should have consistent setbacks to form a streetwall close to the sidewalk, accommodating a pedestrian and patio zone with a minimum width from curb to building façade of generally six metres.
- d) The minimum height of buildings at the street should be eight metres or two storeys.
- e) Parking should be located at the rear or side of buildings, never in the front, and on-street parking should be provided. Side yard parking should be restricted to two rows and set back from the street, behind landscaping and pedestrian amenities.
- f) The facades of retail buildings should include large clear glass windows and frequent store entrances to aid shoppers and encourage street life.

7.6.11 Planning for Intensification

Plans for stand-alone retail in Village Centres and the Town Centre should demonstrate how sites can easily evolve to accommodate more uses and increase population or employment density over time.

7.6.12 Mixed-use Development

Buildings with retail or community uses on the ground floor and residential units or office space on upper floors should be strongly encouraged in mixed-use centres. Horizontal mixed-use, where apartment buildings or townhomes are located behind retail uses, should also be encouraged.

7.6.13 Grocery Stores

Grocery stores will provide an important retail anchor in the Village Centres and Town Centre. They are encouraged to be street-related but may also be located behind smaller retail units fronting the street.

7.6.14 Small Businesses

Multi-tenant commercial developments in Village Centres and the Town Centre should be encouraged to include multiple units for small businesses and professional office space on a second storey.



Village centres should include a central square that can be used for community events.

7.6.15 Gathering Places

Streets within Village Centres and the Town Centre should have wide sidewalks and benches to encourage social interaction and accommodate special events. In addition, each Village Centre should include a central square or other open space for passive enjoyment and community events. Gathering spaces should be planned for four-season community use.

7.6.16 Laneways

Generally, development in Mixed-use Centres should be serviced by public or private laneways to minimize the visual impact of loading, garbage and parking areas.

7.6.17 Land Use Plans and Design Guidelines

Area Structure Plans should include detailed plans showing how residential, commercial and community uses are to be configured in each Village Centre and how the public realm will support walking, cycling, transit use and driving. Urban design guidelines should also be prepared to guide the form and architecture of development and the design of public and private open spaces.

7.7 Parks, Schools and Other Community Facilities

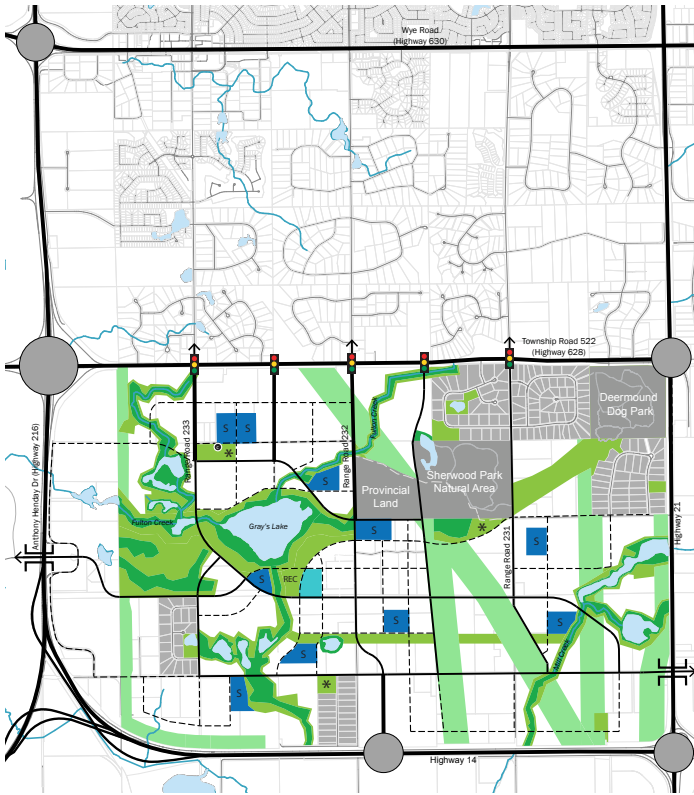
Community facilities are essential places for recreation, education and culture. They build community and support healthy lifestyles. The policies below should guide development of Colchester's civic infrastructure and ensure future residents have access to a full range of public amenities close to home. Since the permitted 10% Municipal Reserve dedication is generally not adequate to accommodate all of the community facilities required by a community including schools, parks and recreation centres, the County will need to create incentives that encourage a higher dedication rate.

7.7.1 Open Space Master Plan

The County should prepare an Open Space Master Plan at the time of the ACP or ASP process and / or during an update of the Open Space and Recreation Facility Strategy document to address all publicly accessible open spaces within Colchester, with the goal of creating an interconnected system of open spaces. The Master Plan should specifically address the role, character and function of planned open spaces linking Fulton Creek, Gray's Lake, Sherwood Park Natural Area and the adjacent provincial land, and Deermound Dog Off Leash Park, as well as improvements to each of these major features. The plan should also incorporate open space corridors to be created by development setbacks from pipelines, and should use consistent design standards for signage throughout Colchester.

7.7.2 Major Recreation Centre

There is an opportunity in Colchester for the County to develop a major indoor/outdoor recreation facility on approximately 8 hectares (20 acres) adjacent to the Town



In addition to open spaces shown on the concept, Colchester should include a variety of community and neighbourhood parks.

Centre. The precise size and programming of the recreation centre will be based on a study of current and projected facility needs.

7.7.3 Community Centres

In addition to the major recreation centre, the County should plan smaller community centres throughout Colchester, to be constructed in line with community growth. ASPs should confirm the locations and sizes of community centres. There should be at least one recreation centre in addition to the major recreation centre that would range from 3-4 hectares (8-10 acres) to accommodate a community facility as well as supportive open space. The programming of community centres will depend on community needs, but should include some indoor recreational

facilities, meeting space and potentially other facilities such as a library or cultural venue. Colchester Community Hall will remain as an active community facility.

7.7.4 Mixed Use Recreation Centres

The County should consider integrating complementary commercial uses, such as restaurants, personal services and sports equipment/apparel stores, with the major recreation centre and potentially other community centres planned in Colchester.

7.7.5 Community Parks

Community parks of at least four hectares should be located in highly visible and accessible places where they complement and link Environmental Reserve lands. Community parks should serve multiple neighbourhoods with a range of outdoor facilities and passive green space. Area Structure Plans (ASPs) should determine the size and location of community parks.

A network of interconnected trails should be used for both transportation and recreation.

7.7.6 Neighbourhood Parks

All residents should be within 400 metres (a five-minute walk) of a park. In addition to having access to community parks, each neighbourhood should feature a central gathering place with a playground, green space and seating areas. Neighbourhood parks generally should be one to two hectares and are not shown on the community design concept.

7.7.7 Food Production in Parks

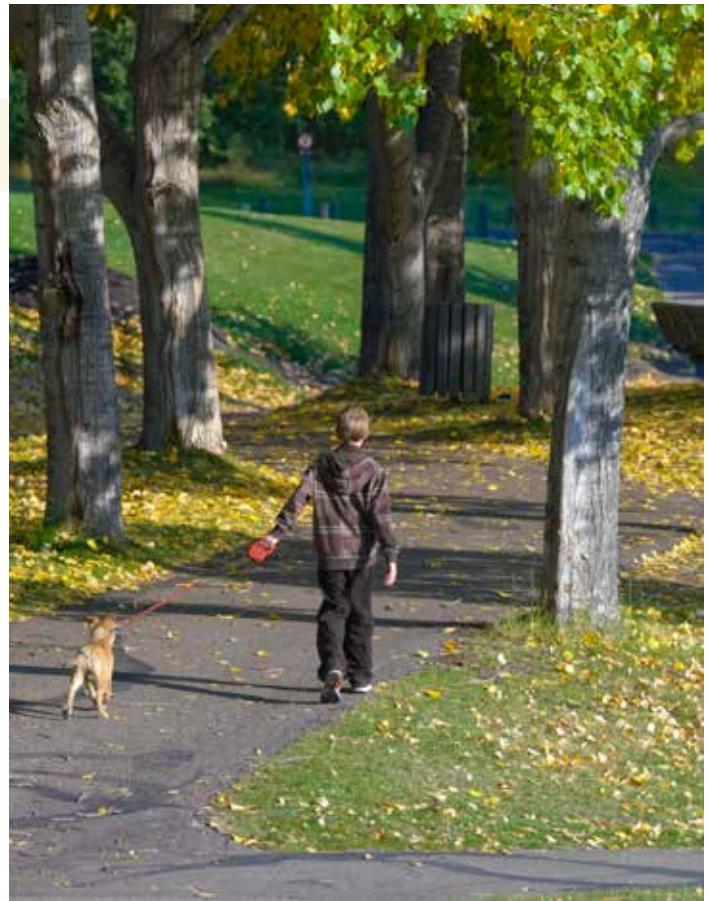
The design of all parks should consider locations for community gardens and the inclusion of fruit-bearing trees in landscape plans, in balance with other park programming needs.

7.7.8 Linear Open Spaces and Trails

Where possible, linear open spaces should link together natural features and parks, as illustrated in the community design concept. A restored environmental area on the provincially-owned lands to the west should link the Natural Area to Gray's Lake, and an environmental link to Deermound Dog Off Leash Park should also be established. Trails should be provided for recreation and as links within the overall transportation system. Pipeline corridors and Environmental Reserve should be used to provide trail linkages where possible.

7.7.9 Dedication of Municipal Reserve

While the Municipal Government Act (MGA) restricts the Municipal Reserve dedication requirement to 10% of net developable land, the County should encourage additional dedication of Municipal Reserve where required to meet community needs.



7.7.10 Open Space Target

The County's target for the provision of public parks and open spaces to serve the new community in Colchester is one hectare for every 75 residents, or 13.4 hectares for every 1,000 residents.

7.7.11 Open Space Access and Visibility

Parks, natural areas and other public open spaces should be highly visible. At least 50% of the boundary of a park should be framed by streets. Public streets should line major environmental features wherever possible and within neighbourhoods at least 50% of the boundary of a natural feature should abut a public street or park.

7.7.12 Mitigating Impacts

Major recreation facilities should be buffered from residential areas by open spaces or other uses, such as a school or commercial use, wherever possible.

7.7.13 Schools

It is anticipated that a minimum of nine primary schools (K-6 or K-9) and one high school will be required in the new community. Preferred locations for schools, adjacent to the planned major open space system, are identified in the community design concept. These locations should be confirmed and additional sites identified, as required and in consultation with the school boards, during the preparation of ASPs. Most residents should be within 800 metres of a primary school to encourage walking and cycling to school. The high school should be located next to the Town Centre where possible to facilitate transit use and after school employment opportunities. To optimize use the use of available land, the use of sportsfield sites should be shared between schools and other municipal needs.

7.7.14 Joint Use Sites

The public and separate school boards should be encouraged to share school sites wherever possible, while ensuring each site has separate roadway access. Larger school sites identified on the community design concept can either be used as a high school site or joint primary school sites. In addition, joint use sites for schools and other community facilities such as community centres, libraries and performance spaces should be encouraged.

7.7.15 Major Institution

A site for one or more major institutions, such as a university, college, healthcare facility or government office building, has been identified in the community design concept in the planned Town Centre. This site should be reserved for such uses at least until an ASP is prepared for the Town Centre. The site should be designed as a compact urban campus with ancillary uses such as restaurants, retail and potentially housing that supports the institution(s).

7.7.16 Fire Halls

A minimum of two fire halls are expected to be needed to serve a new community in Colchester. They should be located in Mixed-use Centres or residential neighbourhoods, with safe, easy and efficient access to the arterial and collector road network. Their location(s) should provide for the most effective and efficient deployment and return of fire apparatus and resources to the stations.

7.7.17 Meltwater Facility

A potential location for a facility to store and melt snow has been identified in the community design concept on the west side of Highway 21, north of Highway 14. The Meltwater facility will require wastewater services and it should be designed to minimize any adverse environmental and visual impacts.

7.7.18 Public Works Sites

Community facilities such as public works yards and Enviroservice Stations (full service recycling stations) should be accommodated within the Business Park Area, Major Retail Area and where appropriate buffers from residential development are provided.

7.7.19 Green Buildings

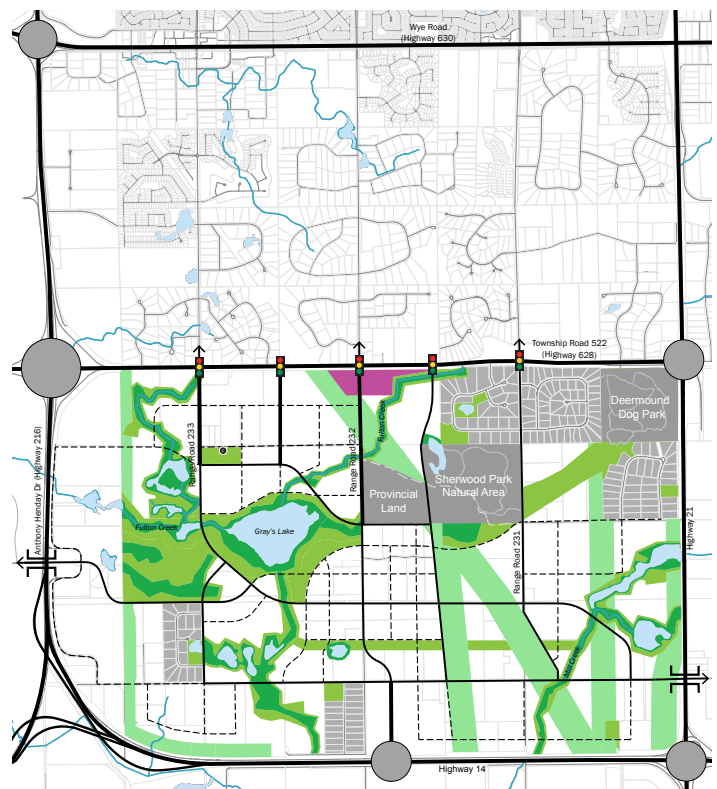
As per the County's Municipal Sustainable Buildings Policy, all public facilities in the new community should be built to a high environmental standard (e.g., LEED Gold or higher). The County should encourage all development to meet or exceed the highest green building standards in place at the time, and to this end should develop incentives for green development.

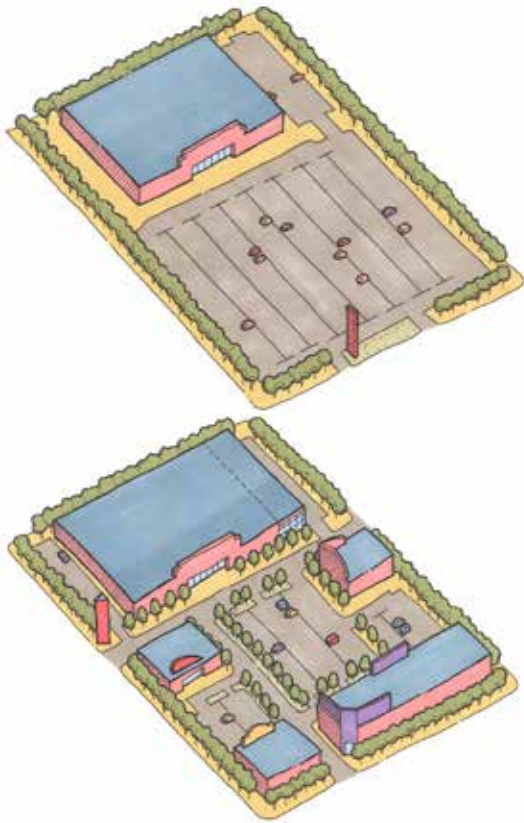
7.8 Major Retail Area

Future residents of a new community in Colchester will seek a variety of retail establishments within the community, including large-format department and home improvement stores. Since "big boxes" are generally car-oriented, the best location for them is near the highway gateways and away from the Village Centres, which are intended to be more pedestrian-oriented. The community design concept identifies a Major Retail Area at Highway 628 and Range Road 232.

7.8.1 Large-format Retail

The Major Retail Area should be limited to large-scale, warehouse-style retail establishments as well as automobile sales and service establishments (including gas stations). Multiplex cinemas may also be considered.





Major Retail Areas can be made more hospitable by lining sites with buildings and breaking up parking with sidewalks and landscaping.

7.8.2 Mid-size and Smaller Commercial Uses

To help prevent the Major Retail Area from competing with the Village Centres, and vice versa, mid-size and smaller retail and entertainment uses, including restaurants, should be capped at 15-20% of all development in the Major Retail Area.

7.8.3 Site Planning for All Modes

In addition to catering to drivers, the Major Retail Area should be designed to be accessed by transit, cyclists and pedestrians. Buildings should be encouraged to have main entrances close to the street. Main access driveways should be treated like streets, with sidewalks, lighting, trees, and potentially transit stops. The area in front of store entrances should have benches and bike parking.

7.8.4 Planning for Intensification

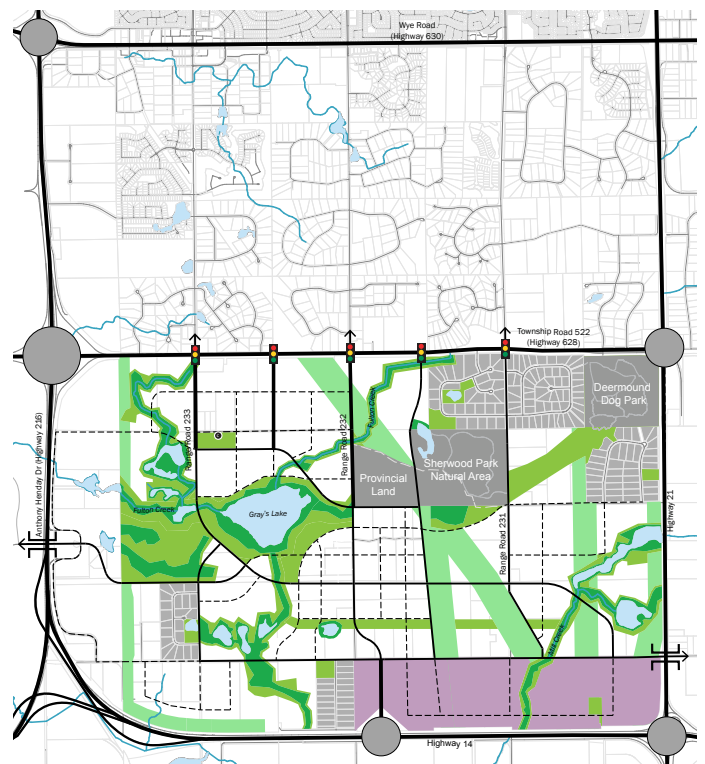
Plans for retail development should demonstrate how sites can easily evolve to add more uses over time and become more pedestrian-oriented.

7.9 Business Park Area

The Business Park Area is intended to accommodate a range of employment uses but would be a particularly appropriate location for office developers and tenants seeking good highway visibility and access. This area could also be promoted to employers in sectors targeted for growth in the county, including health care, finance, and professional, scientific and technical services. Businesses that support agriculture would also be appropriate, provided they have no adverse impacts on adjacent residential or commercial uses.

7.9.1 Highway-oriented Employment

Lands adjacent to Highway 14, beyond the Major Retail Area at Highway 628, should be reserved for the development of business parks containing primarily office buildings and light industry. Public works and transportation facilities may also be accommodated in the Business Park Area.





Sites in Business Park Areas should be well landscaped with parking at the side or rear of buildings.

7.9.2 Clean Industries

Manufacturing and other industrial uses in the Business Park Area should be wholly contained within buildings and have no noxious impacts. Outdoor storage should be prohibited. Facilities with low employment densities and which generate frequent truck traffic should be encouraged to locate in other, more appropriate industrial areas in the county. Outdoor storage associated with a public works or transportation facility may be considered, but such uses should be located away from public view and screened.

7.9.3 Agricultural Services and Innovation

Commercial and industrial businesses that support agriculture, including businesses engaged in agricultural research and development, should be considered in the Business Park Area in Colchester. Greenhouses should be considered where such uses can be appropriately buffered from other employment uses and residential areas.

7.9.4 Employment Density

Employment densities in the Business Park Area are expected to vary, but Area Structure Plans should establish minimum targets of at least 50 jobs per net hectare. Office development should be located close to arterial roads to benefit from potential access to public transit.

7.9.5 Landscaping and Parking

Sites in the Business Park Area, particularly front yards and employee amenity space, should be well-landscaped. Parking generally should be located at the side and rear of buildings and should be well screened from Highway 14 and adjacent roads with landscaping. Buildings along Highway 14 should present the highway and parallel service road with attractive facades and generous landscaping.

7.9.6 Accessory Retail

Retail uses should not be considered in the Business Park Area, except retail that is accessory to a business use and occupies a small portion of the development, generally no more than 15%.

8 Implementation

This document establishes a vision and principles, community design concept, and set of policy directions to guide development in Colchester. If Council decides to proceed with growth in the area, a series of steps will be required to implement the growth management strategy and ensure that the County has the tools to achieve the vision for a sustainable new community.

8.1 Statutory Documents

Municipal Development Plan

If Council accepts the growth management strategy (GMS), amendments to the Municipal Development Plan (MDP) would be required to recognize Colchester as the location of the county's next urban community. The land use map would need to be updated to include Colchester within the Urban Service Area boundary.

The MDP should also establish requirements for what must be included in Area Structure Plans (ASPs) for Colchester, to ensure that they achieve the objectives of the growth management strategy. For example, in accordance with policy direction 7.5.8, ASPs should be required to describe how development will help meet the County's affordable housing targets.

MDP amendments will need to be forwarded to the Capital Region Board for approval.

Area Concept Plan

To translate the growth management strategy into a statutory document, the next step would be for the County to prepare an Area Concept Plan (ACP) for the Colchester area. The ACP should be based on the GMS and reflect the vision, principles and community design concept described in the GMS. In most cases, the policy directions in the GMS can be easily translated into policy by simply replacing the word "should" with "shall."

The County will need to do some additional consultation as part of the development of the ACP. At a minimum, discussions will be required with Alberta Transportation regarding Highway 628, with EPCOR regarding water servicing options, with the school boards regarding the number and location of schools and with the City of Edmonton regarding inter-municipal issues such as transit.

More detailed technical studies than those undertaken for the GMS will be required at either the ACP or ASP stage. These may include, among other studies:

- A comprehensive transportation modelling study
- Detailed engineering studies and hydraulic analyses to determine servicing requirements and locations, possibly as part of an Engineering Master Plan
- Top of bank surveys, slope stability studies, biophysical assessments and floodplain analyses to define Environmental Reserve
- Conservation and management plans

Following approval by Council, the ACP would need to be submitted to the Capital Region Board (CRB) for review and approval in accordance with the Regional Evaluation Framework. CRB approval is dependent on the ACP being in compliance with the Capital Region Growth Plan.

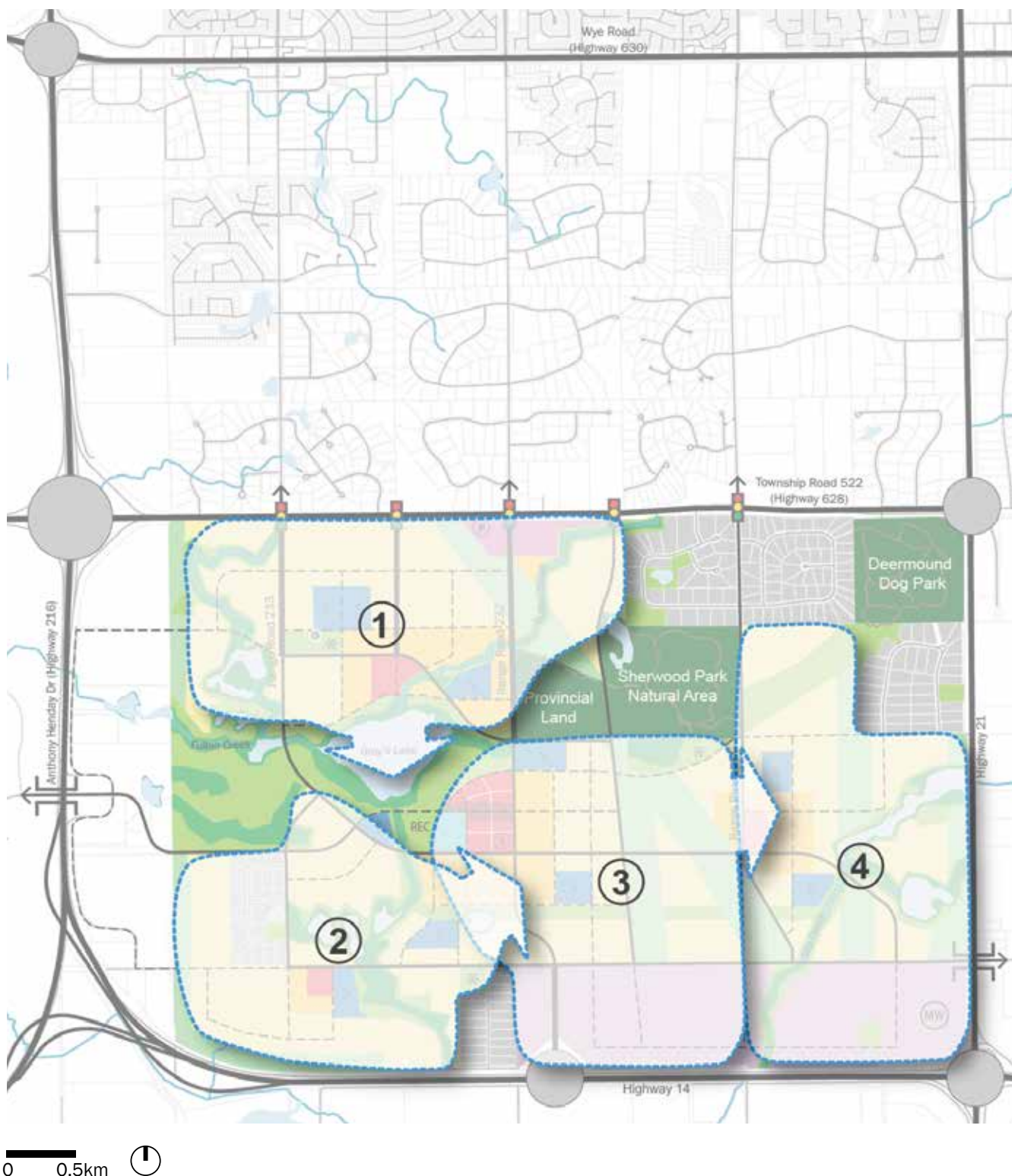
Area Structure Plans

Once the Area Concept Plan has been adopted by Council, developers and landowners could begin to prepare Area Structure Plans (ASPs) for their land within the framework provided by the ACP. Once ASPs are in place, the Land Use Bylaw would have to be updated to reflect the new designations of the land.

Figure 8.1 shows a conceptual phasing strategy for Colchester, which should guide the timing of ASPs. Development should start from the northwest, adjacent to Highway 628 and the Transportation Utility Corridor, as this is the most logical starting point from a servicing and connectivity perspective. From there, development should proceed south, then east. The Town Centre should not be developed until Colchester has reached a critical mass of population that is capable of supporting the retail, services and transit that it will provide. The eastern portion of Colchester will be the last to develop.

It is recommended that a peer review process be established for ASPs. The purpose of the process would be to evaluate ASPs in relation to the vision, principles and policies for Colchester, as well as best practices in community design. Where appropriate, peer reviewers should provide recommendations on how ASPs should be modified to achieve the County's objectives for Colchester. In particular, the peer review group should include expertise in urban design, land use, transportation and environmental planning. The peer review group could be an extension of the sustainable neighbourhood review committee suggested in the County's SUNliving Implementation Manual.

Figure 8.1
Conceptual Phasing Strategy



8.2 Non-Statutory Documents and Incentives

Urban Design Guidelines

To achieve the architectural and public realm objectives for Colchester, urban design guidelines should be prepared for each component of the community. This would include Low-density and Medium-density Neighbourhoods, Mixed-use Centres, Business Park Areas and Major Retail Areas. To ensure a consistent approach across the community, the County should consider leading the development of the guidelines; however they could also be prepared as part of Area Structure Plans (ASPs).

New Engineering Standards

Policy direction 7.3.2 states that the County should revise its current subdivision design standards to reflect best practices and a “complete streets” approach. The success of Colchester’s overall community design plan and transportation network depends on the creation of a multi-modal circulation system that elevates the quality, safety and convenience of pedestrian, bicycle and transit movement. Revised engineering standards are one tool that the County requires to support the development of such a system.

County-wide Studies

The policy directions in the Colchester GMS when carried forward into an ACP and ASPs may be revised, refined and/or augmented based on the recommendations of any County-wide studies.

Incentives

Much can be achieved through strong policy, but creating a truly different community in Colchester will also require the use of incentives. To demonstrate its commitment to the vision for Colchester and encourage the development community to help implement the vision, the County should consider developing incentives to implement some of the more progressive policies of the GMS. In particular, incentives likely will be an important tool to achieving the affordable housing, green building, and renewable energy objectives of the GMS.

The Colchester Growth Management Strategy is just the first tool of many that will be needed to fully plan, design and implement a new community in Colchester. Each future study and instrument should build on those that preceded it, never losing sight of the overall vision, principles and conceptual framework of the GMS.

